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ESSAY

ON THE

ORIGIN, HISTORY, AND PRINCIPLES,

OF

Gothic Architecture.

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OF

Gothic Architecture.

BY

SIR JAMES HALL, BART. P.R.S. EDIN.

Est enim omnium in Anglia Ecclesiarum prima et vetustissima, primo ex virgis torquatis facta, ex qua virtus divine sanctitatis jam inde a principio redolevit spiravitque in omnem patriam. Hist. MS. Glastoniensis Eccles. in Bib. Cott.

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CHAPTER I.

State of information as to Architecture. A singular mystery surrounds every thing relating to the Gothic style. Probable cause of this obscurity. The downfall of the Gothic style ascribed to the great Italian artists. Their hostility traced to a local circumstance. Appeal from their judgment to the rules of the ancients. Architectonic imitation defined and illustrated. History of the Author's feelings relative to this enquiry. Essay formerly read in the Royal Society of Edinburgh.

CHAP. I. State of information as to Architecture.

THE principles of design which guided the architects of ancient Greece, have been handed down to us by undoubted authority; yet we are entirely destitute of similar information respecting another style of architecture, which, not many generations back, prevailed exclusively in our own country.

AP. I.

A singular mystery surrounds every thing relating to the Gothic style.

The principles of Gothic architecture, or at least its methods of construction, must have been familiar to every Artist, who, before the period of the Reformation, superintended the building of a church, or of an abbey; and it seems wonderful that information so widely diffused should have disappeared so completely; but this wonder ceases in a great measure, when it is learnt, as will appear, upon the most respectable authority, in the course of the following pages, that the practice of the Gothic style was possessed exclusively by the society of Free Masons, who are known, at all periods, to have prided themselves in maintaining the most inscrutable secrecy in their transactions.

Probable cause of this obscurity.

The natural effect of concealment is to awaken curiosity; and much ingenuity has been spent in attempting, by conjecture and by antiquarian research to detect the origin and principles of Gothic architecture. These efforts, however, have been but little successful; for several of the most prominent and most characteristic features of this style occur, of which no explanation has been furnished, or even attempted by any of the theories proposed.

The principal object of the following Essay, is to prosecute a similar undertaking, I trust, with better

success; since the theory which it endeavours to vindicate and illustrate, is not confined in its application to any particular set of Gothic forms, but embraces them all without exception. It applies also to this style in all stages of its progress:—in that state of simplicity peculiar to its first appearance; as well as in that of excessive refinement and complication, to which it had arrived at the period of its downfall.

Another branch of this Essay is occupied with the Gothic style, as an object of taste; the success which has attended its employment in connecting ornament with utility, being fully brought into view. It is hoped, upon this ground, that some steps are made, in concurrence with the present disposition of the public, towards the restoration of this much injured art, to that due share of estimation which it once possessed, and which it lost early in the 16th century by one of the most sudden and violent revolutions that has ever taken place in any department of the fine arts. A brief notice of the nature and causes of this event, will throw light upon the general question, and will assist me in stating those circumstances by which I was induced to enter upon the subject of this Essay.

This revolution in taste was undoubtedly brought about by the great Italian artists of that age, with Michael Angelo and Raphael at their head. The temper of these masters, in regard to the Gothic style, may be judged of, by the following passage in Vasari, their friend and companion. In the Introduction to his Lives of the Painters, after giving an account of the five orders of ancient architecture, he says,* "There is still another kind of work called German, of which the ornaments and proportions differ widely, both from those of the ancients and of the moderns: it is

* "Ecci un' altra specie di lavori che si chiamano Tedeschi, i quali sono di ornamenti, e di proporzione molto differenti da gli antichi e da' moderni; nè oggi s' usano per gli eccellenti, ma son fuggiti da loro come mostruosi e barbari; mancando ogni lor cosa di ordine, che più tosto confusione o disordine si puo chiamare; avendo fatto nelle lor fabbriche, che son tante c' hanno ammorbato il mondo, le porte ornate di colonne sottili ed attorte a uso di vite, le quali non possono aver forza a reggere il peso, di che leggerezza si sia; e così per tutte le faccie ed altri loro ornamenti facevano una maledittione di tabernacolini l' un sopra l' altro, con tante piramidi, e punte, e foglie, che non ch' elle possono stare, pare impossibile ch' elle si possano reggere. Ed hanno più il modo da parer fatte di carta che di pietre, o di marmi. Ed in queste opere facevano tanti risalti rotture, mensoline e viticci, che sproportionavano quelle opere che facevano; e speso con mettere cosa sopra cosa andavano in tanta altezza, che la fine d' una porta toccava il tetto. Questa maniera fu trovata da i Gotthi, che per aver ruinate le fabbriche antiche, e morti gli architetti per le guerre, fecero poi coloro, chi rimasero le fabbriche di questa maniera; le quali girarono le volte con quarti acuti e riempierono tutta Italia di questa maledittione di fabbriche; che per non averne a far più, s' è dismesso ogni modo loro. Iddio scampi ogni paese da venir tal pensiero ed ordine di lavori che per essere eglino talmente difformi alla bellezza delle fabbriche nostre, meritano che non se ne favelli più che questo." Vasari *Vite de' Pittori, Introduzzione*, p. 24. Ed. Bologna, 1647.

not practised now by our first-rate artists, but is shunned by them as monstrous and barbarous, being void of all order, and rather deserving the name of disorder and confusion. In their buildings, which are so numerous that the face of the earth is infested with them, we see doors ornamented with slender columns, and twisted like vines, incapable of supporting even the lightest weight. On every face of these buildings, has been placed such a swarm of little tabernacles, one upon the top of another, with so many pyramids, and points, and leaves, that, so far from appearing likely to last, it seems impossible they should be able to bear their own weight; and they look more as if cut out in paper, than formed of stone and marble. These works have so many projections, breakings, brackets, and twinings, that every thing is crowded and disproportioned to itself; and one thing is heaped upon another to such a height, that a door is often seen to reach to the very roof.

"This mode of building was invented by the Goths; for the ancient edifices being destroyed, and the architects killed in the wars, those who remained masters of the country constructed buildings in this

way. They made their arches pointed, and crowded all Italy with these cursed fabrics. May Heaven preserve every good country from following such detestable fancies, whose ugliness forms so great a contrast with the beauty of our works, that they do not deserve to be any more spoken of."

Their hostility traced to a local circumstance.

Such a declaration, coming in a manner so direct and positive from the school of Michael Angelo, from the fountain head of modern taste, seems calculated to give rise to much perplexity, when contrasted with the admiration expressed by men of the highest authority, for works of Gothic Architecture. But a fact hitherto, I believe, overlooked, relieves us in a great measure from that perplexity; it is, that the Gothic of Italy is very inferior to that of the rest of Europe, so that the severe terms employed in the passage just quoted, which, if applied to the specimens of that style in England, France, Germany, Spain, or Portugal, would be most unjust, and even ludicrous, are well merited by the Gothic of Italy, of which alone Vasari could speak, since his life, written by himself, shews, that he had never crossed the Alps. My recollection of what I had seen in that country led me to this view, in which I have

been confirmed by Mr. Byres,* who has informed me, since his return to this country, that, with the exception of the church of Orvietto, he has found the Gothic of Italy to be of the lowest description. This degraded state has probably arisen from a constant struggle for pre-eminence, during the ages of its purity on this side of the Alps, between the Gothic style and that of the ancients; a struggle which led to the mutual confusion of these two beautiful arts. That such a conflict did take place, we gather from the lives of several architects written by Vasari, in which it appears, that, during this period, occasional attempts were made to revive the architecture of the ancients, although the German style, as he calls it, prevailed upon the whole; and we see in Italy the effects of this conflict most strongly in those productions, which exhibit an incoherent assemblage of Greek and Gothic ideas, the buildings being made up of fragments piled together without sense or taste, producing a set of motley structures well deserving all the curses which Vasari has so liberally bestowed on them.†

* This gentleman is well known as having contributed most successfully to form the taste of his young countrymen, during a residence of more than twenty years at Rome.

† Mr. Byres mentioned to me a circumstance which shews to what a degree the Gothic style was foreign to Italy. A Gothic vault at the convent of *Trinita del Monte*, in Rome,

To whatever cause we ascribe the inferior state of Gothic architecture in Italy, the fact of its inferiority seems to resolve our present difficulty. The Italian masters, surrounded with these contemptible structures, would naturally treat the style to which they belonged without ceremony, never suspecting that it was susceptible of that excellence for which it is elsewhere so conspicuous; and the tone assumed by the school of Michael Angelo, being implicitly followed all over Europe, "architects," as Sir Christopher Wren expresses it, "became ashamed of the modern barbarity of architecture," the genuine feelings of taste giving way, as has frequently happened on other occasions, to the influence of fashion.

Appeal from their judgment to the rules of the Ancients.

Without departing, then, from the deference which is so justly due to those illustrious masters in all that

was shewn to him by father *Jacquier*, who informed him that the chapel, of which it was a remnant, had been built by Francis the First of France, the stones of which it was composed having been brought ready hewn from that kingdom. An inference of the same sort may be derived from Vasari's account of the church of Acesi, built A. D. 1206, by Jacobo Tedesco, father of Arnolfo di Lapo. He tells us that it had "a lofty belfry, the height of which was five times its breadth; having upon its summit an extremely high octagonal pyramid; but the whole was taken down, as it threatened to fall." *Un campanile altissimo, cioè cinque volte alto quanto egli è largo. Aveva sopra una piramide altissima, a otto face, ma fu levata perchè minacciava rovina.* It is obvious that Vasari was altogether unacquainted with Gothic architecture, such as is exhibited in our churches, when he could thus, in such circuitous terms, describe a common spire.

lies within their proper sphere, I must presume absolutely to reject their judgment as to Gothic architecture, which was thus known to them only by the most spurious examples. I am convinced, that if the question had been fairly tried, and if Michael Angelo had been carried out of Italy, (which he never quitted during his life), and had it been required of him to pronounce upon the Gothic style, by an examination of some of those beautiful monuments which abound on this side of the Alps, judging of them by the principles of the ancient Greeks, which he held as the most sacred rule, he could not have failed to appreciate their merit, and would not have delivered that harsh decision by which, ever since his time, the taste of Europe has been overruled.

I had never attended particularly to Gothic architecture till after spending two years in Italy and Sicily, when, from the spirit which I had there imbibed, I was certainly as little disposed as any scholar of Michael Angelo could be, to admire, or even to tolerate, any thing repugnant to the rules of antiquity. Yet it was in this disposition, that returning home, in 1785, through the western provinces of France, I was first struck with the beauties of the Gothic works, which

here occur in the highest perfection, and which, so far from sinking in comparison with what I had lately seen, rose in my estimation, when tried by the spirit of the ancient rules.

One of the most important of these is founded on that principle of *imitation*, which was invariably kept in view by the ancients in their best works. My worthy friend, Mr. Byres, had forcibly directed my attention to the rigorous manner in which this principle was adhered to, in all the purest monuments of antiquity at Rome; and had pointed out its efficacy, in producing coherence, and unity of design. Perceiving that these qualities belonged, in an eminent degree, to the Gothic works before me, I was led to conjecture, that the architects by whom they were erected, had been guided by similar principles. Every subsequent observation having tended to confirm that opinion, I now venture to bring forward the following Essay, the object of which is to prove, that such was in fact their practice, and to show its beneficial effects. But before I can enter into the details of this argument, it will be necessary to make some observations on the peculiar species of imitation, which belongs to architecture.

Architectonic imitation defined and illustrated.

In the execution of a statue or of a picture, the artist undertakes to produce an entire representation of some natural object. The imitation, now to be considered, is of a different sort, the original forms being modified according to the circumstances of the case. In a work destined to answer some useful purpose, whatever visibly counteracts that purpose, never fails to occasion deformity; so that even where ornament is principally intended, the ostensibly useful object of the work, if it have any such, must be provided for, in the first place, in preference to every other consideration. But in almost every useful work, some parts occur, the shape of which is quite indifferent, with respect to the proposed object of utility, and which, therefore, the artist is at liberty to execute as he pleases; a liberty, which has opened a wide field to the taste and invention of ingenious men in every age and country, who have turned their attention to the composition of ornaments, and whose exertions have been more or less influenced, by the state of civilization in which they lived. It would seem, however, that little has been effected by absolute invention, since we see, that recourse has been had, almost universally, to Nature, and that ornament has been

CHAP. I. attained by the imitation of objects, to which she has given a determinate and characteristic form.

Thus, the hatchets and canoes of Otaheite are covered with rude images of various natural objects; the heads of our ships are decorated with figures of men and animals; and among the Greeks, in the period of their highest refinement, we find the handles of vases in the shape of vine branches, or of twisted serpents.

In such cases, the forms of Nature have been partially adopted and so modified, as to suit the useful destination of the work; artists of every age, having been led to select, among the forms of natural objects, such as answered their purpose, to the exclusion of the rest; and having exhibited modified imitations of nature, which, being justified by the circumstances of the case, do not suggest the idea of mutilation. Thus we meet with the foot of a table executed like that of a lion, or the hilt of a sword like the head of an eagle, without asking what is become of the body of the animal, and without being struck with any impropriety in the omission.

Frequently, where the materials employed are themselves possessed of variety and elegance; the

object of ornament has been sufficiently attained, by allowing the natural forms, in whole or in part, to remain in the finished work. For instance, cups are made of shells, of cocoa nuts, or of ostrich eggs, the character and beauty of which depend upon the natural form of the materials. And in the case of the bottles, used by the Roman Catholic pilgrims, an example occurs of an utensil, in which the natural form has undergone little or no change, since it consists of the hard outward skin of a gourd, of the same shape in which it grew upon the plant, with this single variation, that the neck of the bottle is formed by means of a string tied round the fruit when of small size.

This last class of forms has been introduced, by *imitation* into works composed of materials naturally possessed of no peculiar shape. Thus we have silver cups in the form of those made of shells, and fruit-dishes of stone-ware in the form of baskets. The ancient Peruvian vases of pottery are executed in exact imitation of gourds; a practice which probably succeeded the use of gourds as bottles. In such cases the want of real character in the object is supplied by a fictitious one, which, in the hands of a man of

CHAP. I. genius, is often productive of the most happy effects; since it enables him to confer upon his work the merit of consistency, and truth of character, qualities, which influence the mind of the spectator as powerfully, when founded on fiction as on reality. For we judge of such a work, as we do of a romance, in which we are scarcely less interested than if we believed it to be true.

In every country where much refinement of art has been introduced, great pains have been bestowed in ornamenting stone buildings with figures representing various natural objects. As stone is not naturally possessed of any peculiar shape, and, as the useful object proposed in structures formed of it, may be accomplished in various ways, very great latitude is left to the invention of the artist. The latitude has even been too great; for experience shews, that the artist has succeeded best, where his imagination has been circumscribed, and forced into a regular channel by the practice of executing stone buildings in imitation of structures, composed of materials, which naturally possess a determinate and characteristic form. Such was the method followed by the architects of ancient Greece, who constructed temples, and

other public edifices, in imitation of a rustic fabric composed of square beams, supported upon round posts or stems of trees, and who derived the numerous ornaments of that beautiful style, from circumstances which would naturally take place in such a fabric.*

* That they really did imitate a building of wood is stated in the clearest manner, in the works of VITRUVIUS, particularly in his chapter, "De Ornamentis Columnarum." He there speaks of architectural work in stone or marble, as a representation (imago), and of the timber fabric as a reality (in veritate), as will appear by the following quotation.

"Itaque, in Græcis operibus, nemo sub mutulo denticulos constituit, non enim possunt subtus cantherios asseres esse.—Quod ergo supra cantherios et templa in veritate debet esse collocatum, id in imaginibus, si infra constitutum fuerit, mendosam habebit operis rationem. Etiamque antiqui non probaverunt neque instituerunt in fastigiis mutulos, aut denticulos fieri, sed puras coronas; ideo quod nec cantherii nec asseres contra fastigiorum frontes distribuuntur, nec possunt prominere, sed ad stillicidia proclinati collocantur.

"Ita quod non potest in veritate fieri, id non putaverunt in imaginibus factum, posse certam rationem habere. Omnia, enim, certa proprietate, et a veris naturæ deductis moribus, traduxerunt in operum perfectiones. Et ea probaverunt, quorum explicationes, in disputationibus, rationem possunt habere veritatis."

In one respect, this passage is extremely obscure; but in another view, it is sufficiently clear to answer the present purpose. The obscurity arises from the difficulty, or rather impossibility, of discovering the meaning of several of the technical terms employed; these being very rarely used by authors, and relating to a mode of building different from any now practised. But whilst commentators differ as to the precise meaning of the words *cantherius*, *asser*, and *templum*, as used in this passage, they all agree in considering them as denoting parts of the timber frame of a roof. At the same time, *mutulus* and *denticulus* are well known terms of architecture, and appropriated to buildings of stone. The latter part, which relates to the principle of imitation in general, is sufficiently clear. The passage, in English, is nearly as follows:

"Thus in the works of the Greeks, denticles were never placed under a modillion, because it is impossible that the *asseres* can be under the *cantherii*. If, then, what is situated over the *cantherii* and *templa* in reality, be exhibited as under them in the imitation, the rule of the work will be held as false.

"In the same manner, the ancients never approved of, or directed, the introductions,

CHAP. I. A faint and distant resemblance, however, of the original, has generally been found to answer all the end proposed by the imitation; a resemblance, which may sometimes be traced in the general distribution of the edifice, sometimes in its minute parts, and not unfrequently in both. The forms of nature, thus introduced, have been greatly modified by those of masonry. For though stone is by nature shapeless, yet, in the course of practice, many peculiar forms have been long established, and universally employed, in working it; such as straight lines, plain surfaces, square angles, and various mouldings used to soften the effect of abrupt terminations; all of which, originating in motives of mechanical convenience, or a desire of neatness, had, in very early times, been appropriated to masonry, and considered as essential in every finished work of stone. When the principle of imitation was introduced, these masonic forms still

of modillions or denticles in the frontispiece, but preferred a plain cornice; for this reason, that neither the *cantherii* nor *asseres* lie towards the gable, nor can they project beyond it, but are placed with an inclination to the eaves.

"Thus they esteemed it a departure from principle to exhibit, in an imitation, what could not occur in reality. For in finishing their works, they introduced every ornament in an appropriated manner, and according to a real analogy borrowed from nature; and they approved of what could be theoretically accounted for, on the principle of its resemblance to truth."

maintained their ground; and being blended with the forms peculiar to the materials employed in the construction of the prototype, the two classes reciprocally modified each other.

This combination of art with nature, of which we see the most perfect example in the Corinthian capital, produces what are called architectonic forms, in which the variety of nature, being subjected to the regularity of art, the work acquires that peculiar character, which, in a natural object, or in its entire representation, we consider as offensive, under the name of formality; but which, in architecture, we admire as a beauty under the name of symmetry.

Occupied with these views, I was struck, as I have said, with the beauty of some Gothic buildings in the west of France; and seeing them impressed with a character so peculiar, and possessing unity of style, in so eminent a degree, it occurred to me, that they also must have been constructed upon the imitation of some fabric real or imaginary, formed of materials possessing a characteristic shape; and I had begun eagerly to search for indications of a prototype among the buildings which surrounded me, when an accidental circumstance greatly assisted my speculations.

CHAP. I. History of the Author's feelings relative to this enquiry.

It happened, that the peasants of the country, through which I was travelling, were employed in collecting and bringing home the long rods or poles, which they make use of to support their vines, or to split into hoops; and these were to be seen in every village, standing in bundles, or waving partly loose in carts. It occurred to me, that a rustic dwelling might be constructed of such rods, bearing a resemblance to works of Gothic architecture, and from which the peculiar forms of that style might have been derived. This conjecture was at first employed to account for the main parts of the structure, and for its general appearance only; but after a diligent investigation, carried on at intervals, with the assistance of friends, both in the collection of materials and in the solution of difficulties, I have been enabled to reduce even the most intricate forms of this elaborate style to the same simple origin; and to account for every feature belonging to it from an imitation of wicker work, modified according to the principles just laid down as applicable to architecture of every sort.

The whole of this theory has been submitted to an experimental test, by the construction of a wicker fabric now standing in my garden, a view of which is

given in the frontispiece. In it all the peculiar forms of Gothic architecture have been restored to their alleged original state. The facility which has attended this restoration is very satisfactory, and affords, I conceive, no small confirmation of the theory by which it has been accomplished; the variations, too, which time and the course of nature have produced upon this little fabric, contribute to the same end, and furnish explanations of some Gothic forms, which are frequently employed in works of the best times. I shall hereafter produce some documents, which prove, that this mode of construction was in fact employed in old times, in cases of peculiar necessity; and that some fabrics of this description were connected with legendary circumstances, which conferred upon them the highest degree of veneration, in the eyes of men of the middle ages.

Essay formerly read in the Royal Society of Edinburgh.

In an Essay read to the Royal Society of Edinburgh, on the 6th of April, 1797, and afterwards published in their Transactions, Vol. IV. I announced, by a short sketch, my ideas as to the origin of Gothic architecture, which every observation of these last 15 years, has tended strongly to confirm, and which I now bring forward at full length, with the advantage of a

CHAP. I. set of Plates, chiefly executed by Mr. Blore, a young artist of great merit, who has been induced, during several years, to devote himself to this work. In entering upon this subject, I find myself placed in a dilemma, between the desire of giving as much force and perspicuity as possible to the argument, and the fear of fatiguing the attention of the reader, by a burdensome assemblage of details. I must then earnestly solicit his indulgence, if I have passed the golden mean on either side.

CHAPTER II.

Theory of the pointed arch. Of the clustered column. Of the groined roof. Of the tracery of the window in its simplest state. Of the cusp. Of complicated tracery. Of the Gothic mouldings. Specimens of various windows. Of the door. Theory of the crockets. Of the steeple. Of the pinnacle. Universal employment of crocket work. Decoration of a flat surface by cage-work in relief.

OF THE SIMPLE GOTHIC ROOF.

As we enter a Gothic church, our attention is first attracted by a double row of clustered pillars, each composed of an assemblage of long and slender shafts, which, reaching from the ground, nearly to the summit, there separate and spread in all directions, forming the ribs, or groins, as they are called of a vaulted roof. In the meeting of these groins, and in the windows of the sides and ends, we see the form of the pointed arch, the principal characteristic of Gothic architecture. Such structures have, I conceive, been executed in imitation of a rustic fabric, constructed as follows. Suppose a set of round posts driven firmly into the ground, (Plate I.) as shewn in the ground plan, (Fig. 1.) and in the view, (Fig. 2. at *a*, *b*, *c*, *d*,

CHAP. II.

Pointed arch.

Plate I.

CHAP. II.

e, *f*,) the interval between the neighbouring posts in the same row being nearly equal to the distance between the rows, each post being raised above the ground to a height equal to about three of those intervals, (Fig. 2.) Then a set of long and flexible rods of willow, being applied to each post, let them be thrust into the ground at its base, and bound to it by two tyings, one near the ground, and another at two thirds of its height; the rods being left loose from this last point upwards, and free to be moved in any direction. The number and distribution of the rods is shewn by little circles in the ground plan, (Fig. 3.) By this disposition, the inside of each post is entirely covered, so that when seen from between the rows, the lower part of each post is concealed from the view, and presents the appearance of a bundle of rods, (Fig. 4.) similar to that which surrounds the handle of the axe in the fasces carried by the Roman lictor. In this most simple construction, the number of rods applied to each inner post in the row, as *c* or *d*, is five; and the number applied to each end post in the row, as *a* or *b*, is only three.

Clustered column.

Things being thus disposed, the skeleton of thatched roof may be formed by bringing together the loose

Groined roof.

ends of the rods, which had been left free, as mentioned above, and binding them to each other. This is represented as finished in Plate V.; but the structure being rendered intricate by the mixture of different sets of forms, I have, for the sake of distinctness, given each set separately in Plates II. III. and IV. in which the same letters of reference, *a*, *b*, *c*, &c. are maintained through all the Figures, both ground plans and views.

Plates II. III. IV.

The middle rod (*r*) from one of the posts, (*d*, Plate I. Fig. 3. and Plate III. Fig. 1.) being so bent as to meet a similar one (*s*) from the post immediately opposite to it in the middle of the space between the rows, let the two rods be made to cross each other, and let them be bound together at their crossing, (Plate II.) Thus will be produced the exact form of the Gothic arch.

The same being done with each pair of opposite posts, and an arcade of pointed arches being so formed, let them be connected together by a straight rod laid horizontally upon the forks of the crossing rods, and bound to each arch (*gh*, Plate III. Fig. 1. and 2.) I propose to give to this straight horizontal rod the name of the ridge bar.

CHAP. II.

Next, let a loose rod be brought from any two contiguous posts in the same row, so as to form a pointed arch similar to that just described, and nearly of the same height. This being done with every two contiguous posts, (Plate III. Fig. 3. and 4.) and a new set of pointed arches being so produced standing opposite to each other in pairs, let each pair be bound by a horizontal rod, or ridge bar, (as *ki*, and *ml*, Figs. 3. and 4.) laid upon the opposite forks, and bound to each of them; this new set of ridge bars crossing that first described at right angles.

Plate III.

Having in this manner disposed of two out of the three rods connected with each corner post, as *a*, or *b*; and of three of those belonging to each of the others; we have one rod of each corner post, and two of each middle post still to employ; which is done as follows. — A pair of these unoccupied rods being brought together from each pair of posts (as *a*, and *d*,) which stand diagonally with respect to each other; let them be made to meet in the middle, not as in the first case, crossing at an angle, but lying side by side and forming a continued curve or semicircle, and let them be joined together after the manner of a hoop (as shewn separately, and in a direct view, in Plate IV.

Fig. 1.) and the same being done with every pair of diagonal posts, (Plate IV. Fig. 2. and 3.), a set of semicircular arches will be produced, crossing each other at right angles, and the whole loose rods will have been employed. CHAP. II. Plate IV.

Each of the three sets of arches having now been separately described, the complete structure, in which they are all combined (Plate V.) may easily be understood. Plate V.

A frame so constructed would be fit to support thatch, and has probably been often used. It would seem however, that, for the sake of strength, the number of rods has frequently been increased in each cluster, by the introduction between every two of the first, of an additional rod; which rising with them to the roof, still maintains its middle position as they spread asunder, and meets the ridge bar at an intermediate point. This arrangement is shewn in Plate VI. Figure 2. shews a frame-work thus constructed as seen from below, with its covering of thatch. And Fig. 1. of the same Plate, is an exact portrait of the entrance to the cloister of Westminster Abbey.—From the resemblance of the stone work in this example to the wicker structure, we may trace the origin of the Plate VI.

CHAP. II. leading and most characteristic features of Gothic architecture:—the *Pointed Arch*, the *Clustered Column*, and the *Groined Roof*.

In the course of practice, similar modes have been employed, in the midst of innumerable varieties, in respect to the proportion of the parts, and as to the number, magnitude, and distribution of the rods. I have chosen the above simple and regular example as one of the most easy to be understood; but in the course of this Work, I shall have occasion to allude to others, which are extremely complicated. In this place I shall mention only one more example; the structure of which, though not quite so regular as
Plate VII. that of the last, is more simple. In Plate VII. Fig. 3. is a view of the north aisle of Melrose Abbey. In this particular example, the side arches are far wider in span than the arches which cross the aisle. Figures 1. and 2. shew the same form executed in wicker-work, which agrees with the wicker structure first described, and represented in Plate V. differing from it only as to the proportion between the side and cross arches, which, in Plate V. have been represented as equal. That equality, however, was by no means essential in such a structure, whether made of willow or of stone; and

the architect seems, in the arrangement of his plan, to have been guided as to this, by some occasional circumstance of convenience.* The ridge bars in all these simple plans are straight and horizontal, which is universally observed in the nave and aisles; and though it is sometimes omitted, the line in which the opposite sides of the vault meet preserves its horizontality. In all the cases hitherto quoted, the diagonal arches are exact semicircles; but this, though common, is not universal in Gothic roofs; the diagonal arch being sometimes slightly pointed, as may be seen in the side aisles of York Minster, which are of a form in other respects perfectly regular, the side arches being of equal span with those which cross the aisle.

The wicker structure, as shewn in the frontispiece, was formed according to the plan of the cloister of Westminster Abbey, by a set of posts of ash about three inches in diameter thrust into the ground, with a set of willow rods of about an inch in diameter applied to them, the whole being conducted as already fully described. The construction answers perfectly

Frontispiece.

* I have never yet met with a case of the simplest form, such as that of Plate V. in which the span of the cross and side arches were equal; though that equality does occur in the more complex case of the cloister of Westminster Abbey, given in Plate VI.

CHAP. II. well in practice, and affords a firm support for the thatch. The summit of the roof within is about eight feet high, so that a person can walk under it with ease.

Having now given the theory of a Gothic roof, in its state of greatest simplicity, I shall pass on to other branches of the art; and shall return to the roof in a more advanced part of the Essay, when I shall be enabled to explain its complications and varieties, by means of a number of devices, which, in the course of what follows, will be unfolded in succession.

OF THE WINDOW.

The roof might be completed in any of the modes just pointed out; but the building would not be habitable, as a house, unless the intervals between the posts of the sides, and at the ends, were closed. This object would best be accomplished by means of wicker work, the ribs of which might consist of rods like those just described placed at equal distances in these intervals. Every purpose of the inhabitants might be answered by wicker-work, taking that term in its most extensive sense; that is, comprehending both cage-work and basket-work. A cage differs from a

basket only in this, that in one the interval between the ribs is wattled full of twigs, and in the other, these ribs are left bare. A combination of the two seems to have existed in the Gothic original; and we may thus account for the windows, and all their very peculiar forms. In such a fabric, if the openings of the sides and ends were closed entirely with basket-work, the house would be both close and dark. In order to obtain air and light, a window would be formed by omitting part of the wattling, and leaving intervals of open cage-work.

In Plate VIII. Fig. 1. the door *a*, is represented as completely wattled up, as also the side space *b*. In the opening *c* and *d*, windows are formed by omitting part of the wattled work, and leaving two upright rods in each; that in *c* being square, and that in *d* having its upper part bounded by rods, bent into a form similar to that of the rods of the main opening above; so that the window terminates upwards in a Gothic arch. The cage-work thus produced would constitute a very essential feature of the building; for standing in full view, it would form a contrast with what lay beyond it; appearing light upon a dark ground, when seen from without; and dark, as

Plate VIII.

CHAP. II. opposed to the sky, when seen from within; it would therefore be of great importance wherever ornament or effect were studied. If the structure of the Gothic roof was in reality suggested in the manner that has been lately pointed out, it is natural to suppose that those slender ribs of stone, called mullions, together with all the tracery employed in every Gothic edifice, to divide the windows and to support the glass, have been executed in imitation of this cage-work. At Knaresborough, in Yorkshire, we see a window of the church, (Plate VIII. Fig. 3.) divided by a set of straight and vertical mullions, reaching from top to bottom; just as in the cage-work Fig. 2. of the same Plate.

Plate VIII.

Upon this simple idea, numberless variations would be made, with a view to strength, as well as beauty and variety. The simplest of these variations would be produced by splitting each of the upright rods down to the level of the impost of the pointed arch, then carrying the half rods to right and left, as shewn in Plate IX. Fig. 1. Some of the outermost spaces, as *a*, *a*, being wattled up, the middle space would be left in cage-work, as shewn in Fig. 2. of the same Plate, exactly resembling the very common stone

Plate IX.

window, Fig. 3. of the same Plate, which is one of St. Mary's Beverly.

Rods split in the same manner, furnish another figure, likewise very common in Gothic windows. The wicker structure is shewn in Figs. 4. and 5. of the same Plate; Fig. 4. being represented as in the progress of execution. The half rods are first carried to right and left, as in the last case; but the neighbouring half rods, instead of being made to cross each other, are bound back to back at the points *a*, *a*, Fig. 4.; then drawn asunder, and brought to meet again immediately above their original places, and bound face to face at *b*, *b*. They are then separated a second time as at first; and the same operation is repeated, till the whole is filled with a set of regular and perfectly equal figures, of very elegant form, bounded by waving lines, as completed in Fig. 5. This I conceive to be the origin of another very common Gothic window, represented in Fig. 6. which is a window of Selby in Yorkshire.

In the general form of this window, its resemblance to the wicker model may easily be traced; but in all the concave bends of the stone-work, a small pointed ornament occurs, which is very common in Gothic

CHAP. II. windows, and is very general in every branch of the art. As this ornament has not to my knowledge been characterised by any particular name, I have ventured

Cusps. to apply to it that of *cusp*, by which mathematicians denote a figure of this sort.

The cusp seems to have been derived from a circumstance which naturally occurs to willow rods, placed in the predicament we have ascribed to those mentioned above: for one of two things would inevitably happen; either these rods would strike root and vegetate, or they would die, and of course fall into a state of decay. Neither of these circumstances seem to have escaped the inventors of Gothic architecture; for, as we shall have occasion afterwards to shew in the various cases, they frequently represented the rods as in a full state of vegetation. So common, indeed, and so unequivocal is the appearance of foliage in Gothic buildings, that this view did not fail to present itself, as soon almost as it occurred to me to derive the Gothic forms from boughs thrust into the ground. It was long, however, before I met with any satisfactory explanation of the cusped ornament; though the frequency of its appearance, and the uniform manner in which it is introduced in all Gothic

works, left little room to doubt, but that it had an origin in common with the more substantial forms of the style. At last a friend, to whose assistance I have been indebted in many parts of this undertaking, suggested to me, that it might have been borrowed from the appearance assumed by the bark of the rods when about to fall off, in consequence of decay. In pursuance of this suggestion, I attended particularly to branches so situated, and met with several facts tending to confirm this conjecture. In every kind of tree, the bark curls previously to dropping off, in consequence of the unequal contraction of the layers of which it is composed. This takes place variously, in different kinds of wood; in some the bark bends inwards, in some outwards, in some across the branch, and in some lengthwise. I have observed, that the bark of the willow always bends concave outwards, and lengthwise with respect to the branch. One of the first distinct examples I met with of this, was on a pailing of willow at St. Mary's Isle in Galloway, in the summer of 1792, as shewn in Plate X. Fig. 1. The rail had been made entirely of fresh wood, and the posts having all struck root, had then the third year's growth upon them. The horizontal bars had died of

Plate X.

CHAP. II. course, and were in the act of throwing off their bark. This, in some places, was seen separated from the wood at one end, and adhering to it at the other, forming a gentle and continued curve with the mass of bark which still remained attached to the wood. Some pieces of bark, a few inches in length, had separated at both ends, and remained adhering only by the middle; in some places two neighbouring pieces of rising bark met and exhibited a shape very much resembling that of the cusped ornament, which I have just described. Fig. 2. and 3. of same Plate, shew other examples of the same: all drawn exactly from nature.

Fig. 4. Plate X. is from a sketch which I drew upon the spot in 1796 of a cusp of bark, which did actually occur in my willow Cathedral; and it deserves particularly to be noticed, that the cusp of bark which is here seen on the willow, stands exactly in that place of the window where in the stone-work the cusp occurs invariably.

There is great reason to suppose, that an accident of this sort may have suggested the cusped ornament. For if we conceive a window of the willow house, in the state of decay just described, or as represented in

the wicker form in Fig. I. Plate XI. to come under the observation of an architect of genius, in the habit of borrowing all his ideas from this source, and eager to seize upon whatever contributed to the beauty of his compositions, or to give them an air of novelty, it is most natural to believe, that, like Callimachus,* the inventor of the Corinthian capital, he would avail himself of the circumstance, by imitating in stone the curling bark; and this being treated with that regular symmetry, which architecture bestows upon the natural objects which it represents, as shewn in Fig. 2. of the same Plate, would produce a light and elegant effect, and the ornament would soon be very generally adopted. CHAP. II. Plate XI.

As the Gothic architects seem to have held themselves at liberty, either to employ this ornament, or to omit it at pleasure, a similar freedom, will be used in the following attempt, to explain the general forms of Gothic windows; and passing over the cusp, as already accounted for, it will be occasionally omitted in those figures which are introduced with a view to explanation.

The windows hitherto mentioned have been pro- Tracery.

* Vitruvius, Book iv, Chap. 1.

CHAP. II.

duced by means of rods, split *once*, and worked up together, so as to produce equal and uniform compartments; but it may be easily conceived that when the rods are *repeatedly* split, when *detached* pieces are introduced, when the compartments are diversified in size and shape, that the means are supplied of inexhaustible variety.

Plates XII. XIII. XIV. XV. XVI.

Plate XII. and XIII. represent four real windows, as specimens of various classes. The two following Plates, XIV. and XV. exhibit the same windows, stripped of the ornament of the cusp, and accompanied by similar forms, represented as executed in wicker. Plate XVI. shews the details of that wicker construction. In all these explanations, the same letters of reference are used to denote corresponding parts in wicker, and in stone; and are maintained through the different Figures and Plates, to denote each particular object in the progress of its employment, as follows.

Plate XII. Fig. 1, is a window in Magdalen Church Oxford; it is intended to shew the result of rods repeatedly split; the explanation of which will be seen in Plate XIV. Figs. 1. and 2., and in Plate XVI. Fig. 1.

Plate XII. Fig. 2. is a window of St. Giles's Cathedral Edinburgh, intended to shew a construction

formed entirely of hoops, and other wicker forms, which are not, as in the last case, prolongations of the upright mullions, but detached pieces. The construction will appear obvious by inspection of Figs. 3. and 4. of Plate XIV. and by Fig. 5. of Plate XVI. in which last the triangular form seen in the middle of the circle, is shewn to be produced from a single rod.

Plate XIII. Fig. 1. is a window of Beverley Minster, shewing a combination of the two last mentioned methods; its wicker original, as shewn in Plate XV. Fig. 2., being composed partly of prolongations of the upright rods, and partly of detached pieces introduced. The principal tracery in the middle of the window is produced by a rod split repeatedly, as shewn in Plate XVI. Fig. 2. where the construction is represented as half executed. And among the prolongations, upwards of the upright mullions, two of the detached pieces are conspicuous; one in form of letter S.; and the other in that of a hoop with a very elegant triangular figure occupying its middle, formed of a single rod split only twice, as shewn in Plate XVI. Fig. 6.

Plate XIII. Fig. 2. is a window of Trinity Chapel Ely. Here we meet with some forms produced by

CHAP. II. the prolongation of the upright mullions, some by the introduction of detached pieces, and others which admit of either solution, since they may be executed in both ways. This will appear by close inspection of Fig. 4. Plate XV., as I shall now point out in detail. Fig. 3. of Plate XVI. shews the middle rod so split at *a*, *b*, *c*, *d*, and *e*, as to form by its prolongation upwards all the middle and upper part of the window, as denoted by the same letters in Figs. 3. and 4. of Plate XV. Or we may suppose that all that part of the window has been produced by the introduction of a detached rod bent, as in Fig. 9. Plate XVI. beginning at *b*, and ending at *x*; and such a construction has in fact been employed with good effect in a small model in my possession. Figs. 8. and 10. of the same Plate show various modes, in which the side forms might be executed. The rod *g i h* (Fig. 8.) being so split as to form an opening at *i*, and so that the wood shall still remain entire both at *g*, and at *h*. Then hoops formed as in Figs. 4. and 7. with the extremities bent back upon themselves after forming the knot as in Fig. 7, are introduced into the openings as shewn in Fig. 8. The end of the rod thus bent back upon itself, is well marked in the stone work, Fig. 3.

Plate XV. The same form may be produced by another method, as shewn in Fig. 10. Plate XVI. the split rods crossing from side to side, as in *m*, *n*, *o*; might afterwards be constrained to assume the same form as that last described by the introduction of hoops.—It thus appears, that the forms of this window may be executed in various modes; and I have found them all to answer nearly equally well in practice. CHAP. II.

Plate XVII. shews a window of Chartham Church in Kent, the fundamental form of which is different from any of those hitherto produced, but which occasionally, though rarely, occurs in windows, and in other parts of the Gothic style. It has probably originated in accident, but may have been continued with a view to variety. Plate XVII.

I ascribe the origin of this class of forms to the predicament in which a bough or hoop is placed when bent with a degree of abruptness, beyond what its elasticity can bear.—When moderately bent, a rod acquires an uniformly flowing form, as in Fig. 2. Plate XVII; but when the bend is so abrupt or short as to overcome the elasticity of the bough, (as I understand is most likely to happen when it is made use of in the course of summer, and before it has

CHAP. II. acquired sufficient toughness), the hoop yields at one point, as at *a* in Fig. 3, or at *b* in Fig. 4, and an angular inflection takes place frequently without any laceration of the substance; to use a very homely phrase of the basket makers, its back is broken. In this state, all the rest of the hoop except at the point thus yielding, retains its elasticity and flowing curvature, so that a curvilinear angle is produced; the curves which form the sides of that angle being sometimes concave towards the side fronting the opening of the angle, as in Fig. 3. and sometimes convex towards that same side, as in Fig. 4. In making up the supposed original of the window, Fig. 1. Plate XVII. both these modes of curvature seem to have been employed.—A single strain upon a bough will produce one angular point of this kind, which point can never again recover its elasticity; and repeated strains applied to different points of the same bough, may give rise to a number of such points. Thus the bough, Fig. 6. Plate XVII. may have been strained at the three points *c*, *d*, and *e*, and the bough in Fig. 7. at the five points *f*, *g*, *h*, *i*, and *k*. Now if we suppose the form of a rustic window composed of rods repeatedly split, and Fig. 5. representing that window

in wicker; the boughs just mentioned, as shewn in Figs. 6. and 7, might be introduced among the split rods in such a manner as to produce the window Fig. 5, answering to the same letters in Fig. 6, where they indicate the same points of the bough acting its part in the structure of the window. The same with respect to the bough in Fig. 7, in which the letters *f*, *g*, *h*, *i*, and *k*, correspond to the same letters in Fig. 5. Some of the projecting angles of this window bear a considerable resemblance to the cusps lately described and traced to bark in a state of decay; but the facts here are different, as we see at *i*, *k*, and *g*, *f*, &c. in Fig. 5. where the member under consideration is actually detached from the rest of the tracery in a manner quite irreconcileable to any possible state of bark; nor could the curling bark, by any effort of imagination, be conceived to meet the stem so as to form an angle with it, as the projection here treated of meets other points of the tracery at the points *h* and *d*.

By means of these devices, and their combinations, great variety has been introduced into the construction of Gothic windows. But an entire class of forms still remains to be noticed, which very frequently occur in windows, and also in various other parts of

CHAP. II. Gothic architecture. These forms are composed, in a great measure, of straight rods, connected together in various modes, nearly allied to those already mentioned, and frequently intermixed with them. In using them, the architect has the advantage of being enabled to give to work made of short rods, nearly the same strength and appearance with that made of long ones; and of bestowing a consistent and uniform character, on work made of rods of unequal lengths.

Plate XVIII. Fig. 1. Plate XVIII. represents the great window of Westminster Hall, which is principally composed of these forms; and Fig. 2. represents the same window, as executed in wicker-work. I have already, in general terms, solicited the indulgence of the reader towards the details in this work: I must, in a particular manner, urge that request in the present case, which is undoubtedly the most complicated of any that I shall have to enter into, and at the same time one of the most important; since a key is thus furnished to the solution of a set of forms, which, in a greater or less degree, occur in all Gothic works of large size. In order to facilitate these explanations,

Plate XIX. I have in Plate XIX. repeated such of the forms as appear the most intricate, upon a scale, magnified

about three times; every object being denoted in both Plates by the same letters. CHAP. II.

The whole window is first divided into three parts of equal breadth, by two large upright rods, I. II. and III. IV. reaching from top to bottom; each of these sends off a side branch at V. and VII. which forms a pointed arch with the main sides of the window at VI. and VIII. Each of these three compartments is again subdivided into three spaces of equal breadth by two upright rods of smaller size, all of which spring from the bottom of the window; in the two side compartments they extend to its summit; in those of the middle they branch to right and left near the top, and form tracery. In this manner the whole window is divided into nine spaces of equal breadth, which, from the bottom to the level of the impost, are left free and unoccupied; only that at one half of that height, a binding crosses them horizontally from side to side at IX. X. This binding consists of a rope of wicker work, formed of twigs, twisted round each other, and round the uprights just described, and by which they are held firmly in their places. At this place, matters are so arranged, that an upright which passes through the cross binding, may consist of one

CHAP. II. piece or of two; the joining which there takes place being completely disguised. First, suppose the upright to be so joined, the under pieces being split at top, as at the point A, the halves of each, Plates XVIII, and XIX, Fig. 1. as AB and AC, are spread out to right and left, and made to meet with similar halves from the neighbouring uprights, immediately under the rope of twigs at the points B and C, so as to form a series of pointed arches. The lower extremity of each upper piece being then dressed to a sharp edge, is introduced into the split A, and the split sides being forced together by a binding, as at L, the joining is completely concealed; and additional strength may be given, by means of a binding at B and C. When the rods are continued from top to bottom, without any joining, as at F and I, then a piece of split twig, as CF or GI, is introduced, so as to produce the same appearance as at A, where a joining takes place.

In the upper part of the window, the nine spaces, already mentioned, are subdivided by rods variously disposed, as shewn in the Plate. The most general mode is by a straight and upright rod, applied as

Plates XVIII. XIX. follows: Plates XVIII and XIX. Fig 2. the rod *a b*

is placed in a vertical position, half-way between two of the uprights above mentioned. It is split, both above at *b*, and below at *a*; the halves, at both extremities, being spread out to right and left till they meet those uprights, and are bound to them at the points *c*, *d*, *f*, and *e*; each half rod is thus thrown into a curve of contrary flexure between *a* and *c*, and between *b* and *e*, &c. Another rod *x i*, similar to *a b*, and split like it, is then placed directly above it; and having its halves spread out, and applied to the neighbouring uprights, exactly as with respect to *a b*; the distance too is such above *a b*, that the half-rods cross each other in the points *g* and *h*, so as to leave a sort of square opening between them, whose angles are *b*, *g*, *i*, *h*. Another similar rod *k l*, is placed in a similar manner below *a b*, producing another square below *b a*, like that just described above it. The other extremities of the two last mentioned rods are also split at *l* and *x*, and are disposed of as shall immediately be shewn.

At the level of the impost, where the tracery begins, another opportunity occurs of splicing the uprights at M and L, Plates XVIII. and XIX. Fig. 2. The under portion being split, the halves from the neigh-

CHAP. II. bouring rods MO and LN are brought nearly to meet in a pointed arch at NO, and upon it the under extremity of *l k*, split at *l*, as mentioned above, rests and affords an opportunity of binding them together. If the splicing here does not take place, and the rod continues entire, as at P, then a detached piece, as PQ, is introduced, for the sake of uniformity, to act the part of MO, and thus produce another case of ambiguity such as that already described at the cross binding below.

The middle rods MR and LS are split near the summit at R and S; their halves are made nearly to meet at *m*, and a rod *m n* split like *a b*, is made to rest upon the pointed arch so produced; the upper halves of that last rod *m n*, forming pointed arches with the main rods of the window, and thus occupying the summit of the whole.

Four regular spaces, each terminating in a pointed arch, of which PZY is one, Plate XVIII. and Plate XIX. Fig. 4., are formed by meeting of branches split from the upright rods. These are occupied each by two twigs, so crossing as to produce a circle in the middle. There are likewise four triangular spaces irregular but similar to each other, formed by the

meeting of these same branches, of which the space ZWY is one, occupied each by two bent twigs crossing each other. In the windows are also two similar figures, one of which is shewn in Fig. 3. Plate XIX., at VIII., P. IV. The other spaces of this window are occupied entirely by repetitions of the forms already described, as the figure plainly shews.

The same explanation will apply to numberless other Gothic windows, as this form, more or less varied, and combined with others, is extremely common.

OF THE GOTHIC MOULDINGS.

By means of these examples, I trust that the reader will now find it easy to explain upon the theory of cage-work, the general plan of any piece of Gothic tracery. But this will not apply to the details of execution; whoever makes a critical examination of a Gothic window will find, that the cross section of its tracery differs very widely from that of a piece of cage-work; but this difference arises as a natural consequence of the hypothesis here laid down, when all the circumstances are taken fairly into account.

To furnish this explanation, we must have recourse

CHAP. II. to the general principles of architectonic imitation, and to the modifications stated in the first Chapter, which a natural form may be expected to undergo when transferred into works in stone. By means of these principles, I hope to explain the system of Mouldings. Gothic mouldings; one of the most ingenious devices, and one of the best adapted to its object, that has ever been invented.

In attempting to illustrate this very difficult subject, I think it best to adhere to one example. I am acquainted with none more satisfactory than that which was last considered, the window of Westminster Hall; since it comprehends as much variety as any where occurs in one work, and since there is no object in the kingdom more frequently seen, or more easily inspected. This window stands in full view from Palace Yard; and its details may be examined in such parts of the edifice, as are within reach, the whole Plates XX. XXI. XXII. being in one style. Plates XX. XXI. and XXII. are XXIII. XXIV. XXV. employed in the details of this subject. Plate XXIII. shews a small portion of this window, executed upon a large scale, in order to render the forms of the mouldings very conspicuous. Plates XXIV. and XXV. are oblique views of the whole window, one

shaded, the other in outline, calculated to exhibit the various combinations of these mouldings to shew their modes of meeting.

If an artist were required to execute in stone the frame work intended to support the glass of a large cathedral window; and to do so in imitation of a frame of cage-work made of willow boughs, such as any of those lately exhibited, it is certain that he would be tempted, by two powerful considerations of utility, to deviate considerably from a literal representation of the original object. Whilst he maintained the general plan of cage-work, he would gain additional strength, and also impede less light, by assuming a profile in his stone mullions different from that of the willow rods.

It is evident that a strong wind acting upon the glass, as on the sail of a ship, would endanger the whole fabric, unless counteracted by a great power of resistance; and it is well known that the cylindrical form, which belongs to the original, is not calculated to accomplish that purpose with best effect. In the construction of a floor, or of a roof, the carpenter makes use of a beam much deeper than it is broad, and places it so that the deepest, and of course the

CHAP. II. strongest section is opposed to the strain to which his work is exposed Upon the same principle, an architect, when employed to imitate the frame of cage-work, would be tempted to execute his mullions, so that when measured from back to front they should be much deeper than when measured across; a precaution which will not be deemed superfluous when it is considered how brittle a material free-stone is when reduced to small dimensions. The consideration of light would lead to the same determination. It is

Applied to the Mullions.

obvious, that a mullion, whose cross section is oblong, and which is placed with the longest line of that section at right angles to the glass, will interrupt less light than if, containing the same quantity of stone, its shape were cylindrical. In yielding to these concurring motives, the first inventor of Gothic windows is justified by the most illustrious examples of architectural invention, in deviating so far from his original, as to represent a round willow rod by a mullion, whose cross section is oblong.

The first idea of a man accustomed to work in stone, would be to make this cross section an oblong rect-

Plate XX.

angle, perhaps a double square, as in Plate XX. Figs. 1, and 5, compared to Fig. 4, which exhibits the

same in willow. But it would soon occur, that a considerable addition might be made to the quantity of light, without much loss of strength, by removing the four corners, as in Fig. 2, a narrow fillet CB being left between the two sloping surfaces AB and CR. Lastly, with a view to ornament, each of these faces might be cut out with a concave sweep, as *a b* and *c r*; thus producing the entire form in Fig. 3, which, with two small grooves at G and *g* for the purpose of receiving the glass, is exactly the horizontal section of the simplest mullion of the window of Westminster Hall.

In all windows of small size, this simple mullion would afford sufficient strength; but where the size was increased, and, of course, when the strain from wind became more formidable, a demand would arise for additional strength in the mullions. This would naturally suggest the idea of interposing among the simple mullions others of larger size. The first idea would be to place two simple mullions side by side, as in Fig. 6, by which means the strength would be doubled, though at the expence of interrupting twice as much light as in the simple case. But this being done, a great addition could be made to the strength

CHAP. II. Plate XX. without impeding any more light, by adding the stone work indicated in Fig. 7. by dotted lines, both upon the inside and outside of the window. And this additional quantity of stone, acting at a distance from the centre of motion, and after the manner of a buttress, would contribute more to the strength of the fabric than any part of the original mullions of an equal solid measure. The double mullion, with this addition, would therefore have its strength increased to triple or quadruple that of the first simple mullions, and thus perhaps surpass what was required.

We may reasonably suppose, that these reflections have been made by the inventor of this arrangement; since we find that the mullion of the second order in Westminster Hall window, shewn in Fig. 9. is considerably narrower than twice the breadth of a single mullion, and seems to have been made out, as in Fig. 8. by designing two of these single mullions, side by side, but nearer than they could stand in stone, and so that if they were both in imagination completed, they would cross each other, as shewn at *z* and *t*. The additional portions *z x* and *t s* being then introduced in such a manner as to impede no light, the mullion of second order would be completed, as in Fig. 9. By

this arrangement, the entire figure of the simple mullion is preserved on that part of the double one which lies next the glass; thus, $g' a' b' c'$, in Fig. 9. is the same as $h k l m$, in Fig. 8. or $g a b c$, in Fig. 3. There would be a considerable advantage in this method by a saving of light; and experience has shewn it to be sufficiently strong. The introduced parts, $z x$, and $t s$, in Fig. 8, acting with such advantage that the mullion of the second order, though it impedes much less than twice as much light as the single one, may possess double its strength.

These mullions of the second order would afford considerable strength, and have been found sufficient in all churches of moderate size; but in cathedrals and other very large buildings, it has been necessary to carry this arrangement a step farther, and to introduce some mullions of a third order. These seem to have been constructed upon the same principle with that mentioned in the transition from the first order to the second. Two double mullions, like that of Fig. 9. have been placed side by side, as in Fig. 10. so near as to cross each other if produced at z' or t'. Two additions, $z' x'$, and $t' s'$, being then thrown in so as to impede no light, the mullion of the third order, as

CHAP. II. shewn in Fig. 11, has been completed. This has the advantage of impeding much less light than would be impeded by three single mullions; in fact, little more than by two: though it contains a quantity of stone equal to about five of them, producing a resistance much greater than could be effected by that number, if placed side by side.

The figure of the simple mullion, Fig. 3, seems to be uniform in all windows; but the form of the additional part introduced to complete the second and third order, is subject to very great variety, as I shall shew in a separate Plate. In the present instance, the addition completing the second order consists both within and without of a cylindrical rod, connected with the main mass by two sloping planes; and the addition completing the third order, is exactly a repetition of that which completes the second, only that the cylinder is of a larger diameter.

This arrangement may have been suggested by an expedient resorted to by the inhabitants of those willow houses placed in stormy situations, who, in order to give strength to their windows, would employ additional rods, placed as shewn in Fig. 14.

Plate XX. In Fig. 13. Plate XX. the three orders are shewn

side by side in a ground plan, and close together, for the sake of comparison, the line $g\,g'\,g''$, marking the position of the glass. And in Plate XXI, oblique views are given of the same forms denoted by the same letters; the stones being represented as already hewn and prepared for the construction of a window. In these two Plates, the same letters, a, b, c, d, &c. have been appropriated to the same forms; but those employed in the second order have been marked with an accent, thus, a', b', c', and those in the third by a double accent, thus, a'', b'', &c. An important circumstance, arising out of the mode of construction which I have just described, may here be seen. The external form of each inferior order of mullions makes part of the form of all the orders superior to it. Thus the form $g\,a\,b\,c$, of the first order, Plate XX. Fig. 13. is the same with $g'\,a'\,b'\,c'$, of the second order, and with $g''\,a''\,b''\,c''$, of the third order; also $g'\,a'\,b'\,c'\,d'\,e'$ of the second order, is the same with $g''\,a''\,b''\,c''\,d''\,e''$ of the third order. The same circumstances may be traced, by means of the same letters, in the solid stones, represented in Figs. 15, 16, and 17, of Plate XXI. In consequence of this identity, when an inferior mullion meets with one of a superior order, it finds

Plate XXI.

CHAP. II. mouldings exactly the same as its own; the two sets mitering, as it is expressed by the workmen, each moulding uniting with its equal, in a plane parallel to the glass.

Thus, in Fig. 18. of Plate XXI. we see the meetings of two mullions of the first order; in Fig. 19, of two of the second order; and at *i* and *k*, in Fig. 21, of two mullions, of the third order. In Fig. 20, the first order meets the second, and the leading fillet, *b b c c*, of the first, meets at *t* with the corresponding fillet *b b' c' c'* belonging to that second order. The two fillets lying in the same plane *b' b c' c* parallel to the glass; all between that plane and the glass being perfectly regular. In Fig. 21, at *l*, the first order meets the third, and its fillet, *b b c c*, there finds the fillet *b'' b'' c'' c''*, with which it unites in the same manner as in the case last mentioned. At *m*, in Fig. 21, the second order meets the third. Here the rod *e' e'* meets with the corresponding rod *e'' e''* and unites with it in lines parallel to the glass, all within being perfectly regular. If we conceive the rod *e' m*, to be continued into the solid stone, and through it, it will pass clear within the rod *h'' h''*; and if the fillet *b c* is continued in the same manner in imagination, it will

be found to pass within both the rods e'' e'' and h'' h'' of the third order. CHAP. II.

We have now traced the forms of the three orders of mullions occurring in the window of Westminster Hall. They are presented in the order and distance which they stand, with respect to each other, in Figure 12. Plate XX. which exhibits a horizontal section of that window in the line XI. XII. Plate XVIII. Fig. 1.

We should now proceed to apply what has been said in explaining that window itself; but it is necessary, first, to consider how this system has been applied to the cusps. In some cases, the entire fillet, of the first order, together with the concave part within the fillet, are employed in forming the cusp; in others, the cusp keeps within the fillet, and springs locally from the middle of the concave. The two modes are well contrasted in the ruined Church of Dunglass in East Lothian, as shewn in Plate XXII. In one window (Fig. 1.) upon a mullion of the second order, the cusp *a e b c* occupies the first order completely; its fillet *a b c v t s* and concaves *a b e*, and *c b e*, being in continuation of the fillet, and concave of the mullion. These last, at the same time

Applied to the Cusps.

Plate XXII.

CHAP. II.

continuing undisturbed, and appearing where not concealed by the substance of the cusp, as at *s*, *x*, *v*, *y*. The cusp terminating on the side next the mullion by slopes *s t x*, and *v t x*. A triangular hollow being produced, of which *x* is the bottom.

On the opposite side of the church, there is a window, in which, upon a mullion of the first order, Fig. 2. the cusp springs locally at the points *i*, and *k*, from the middle of the concave *m l*, or *o n*, and carries along with it that portion *i m*, of the concave, which lies between it and the glass, and forms the figure *m i p k o s*, which, on the side next the mullion, has two slopes, as in Fig. 1. and terminates outwards in a fillet *i p k*. The main concave *f m l*, continuing and producing with the cusp a triangular hollow, which is bounded outwards by the fillet *i p k*, and inwards by the concave *l r n*, and having *q* for its bottom, the narrow fillet, which accompanies the lines *i p*, and *p k*, and which forms the summit of the cusp, thus lies in a plane parallel to the glass, and about half way between the fillet *l n*, and inside of the concave *m o*. No trace of the cusp appears upon the main concave, either above *k*, or below *i*, till another cusp is introduced. In either of the two cases just described,

and wherever a cusp occurs in Gothic architecture, it is a mere appendage, and could be dressed away, if required, so as to leave the main tracery entire. Which ever mode is adopted, this ornament has a peculiarly light and elegant effect.*

The cusps in the window of Westminster Hall are executed in the mode last pointed out, rising locally from the middle of the concave of the single mullion. Thus, although the ribs which form the tracery, and which possess characteristic mouldings continued throughout the whole window, are only of three orders, the window does possess four orders of termination including the cusps.

To each order a distinct office has been assigned by the architect. The whole window, Plates XVIII. and XXV. is divided into three large compartments by means of triple mullions, I. II. and III. IV. in imitation of rods split once at V. and VII. and having one half of each V. IV. and VII. II. placed vertically, and the other carried to one side, viz. V. VIII. and VII. VI. These divisions are again divided upon the right

Plates XVIII. XXV.

* In the last mentioned window, the bounding fillet of the cusp *i p k*, lies in a plane nearer to the glass than the main fillet of the mullion *f l n*, by $2\frac{1}{2}$ inches, and projecting two inches beyond the inside edge *m s o*, of the concave.

CHAP. II.

hand, and the left, in a manner exactly similar, by the double mullions LS and MR, &c. These last are again still farther subdivided by tracery, formed of single mullions *a*, *b*, *i*, *x*, and according to the arrangement explained page 45, and Plate XIX. Fig. 2. Lastly, the whole is decorated with cusps, rising, as we have already stated, out of the innermost concave, and having no appropriate moulding, but their fillets, or bounding lines, lying in a fourth plane parallel to the glass, as fully described in Plate XXII. Fig. 2.

Plates XXIII. XXIV.

In Plate XXIII. the position of the four planes parallel to the glass may be seen, where a cross cut of the greatest mullion is represented. The outermost of these planes passes through C, the next through B, the next through A, and the nearest to the glass through DEF. In this same Fig. Plate XXIII. and in the shaded Plate XXIV. most of the circumstances already detailed in Plates XXI. and XXII. and already described, may be traced: thus at G, a meeting takes place between a double and a triple mullion. The superior member of this last passes over the first entirely, which in its turn passes over the single mullions. In this manner, a number of separate

designs are carried on in the same piece, each preserving its own characteristic peculiarities, without disturbing the others, or being disturbed by them.

The principles of construction which have been thus stated in detail, with respect to the window of Westminster Hall, may be traced, as to all essential points, in every large Gothic window of the good times. The same subordination of orders, and the same adherence of each member or fillet, to its own peculiar distance from the glass, is always maintained; however much these members may differ from each other. The same arrangement has been extended, as hereafter will be more particularly shewn, to every department of Gothic architecture.

Plate XXVI. is employed in shewing a collection of various mouldings. In Plates XXVII. and XXIII. a number of windows are brought together, as specimens of varieties, which are to be met with in the tracery; to which collection every reader will find it easy to add many from his own observation.

Plates XXVI. XXVII. XXVIII.

OF THE DOOR.

The simple Gothic door, of which we have an example in the cloister of Westminster, Plate XXIX.

Plate XXIX.

CHAP. II. Fig. 2. can very easily be reduced to the principles we have laid down. Its under part, immediately above the entry, consists of a pointed arch, such as has repeatedly been described, and which seems to be a simple imitation of two boughs, meeting and crossing, as in Fig. 1. of same Plate. Over this is an arch of contrary flexure, in imitation of that in Fig. 1. This upper arch is decorated at regular intervals with Crockets. tufts of foliage called *Crockets*, in imitation of buds springing, as in Fig. 3. from the boughs, which, in that situation, might naturally be expected to strike root and grow; and at its summit, the rods, after passing through the representation of a binding, terminate in an assemblage of similar foliage called a *Finial*. This form has the most elegant effect, and has been ornamented in many cases to the highest pitch. The various parts of the door are connected and arranged like those of the windows, by mouldings of all degrees introduced, as shall be fully shewn hereafter.

OF THE STEEPLE.

THE simple steeple, or rectilinear octagonal spire, has its origin very obviously in the same general

principle, Plate XXIX. Fig. 6. at Morley in Derbyshire. Its exact form is produced by eight poles thrust into the ground at the angles of a regular octagon, and having their upper extremities assembled and bound together, as in Fig. 4. In the original, this fabric might be introduced for ornament, or to serve as a guide in a wild state of the country; and in churches of stone, has been placed in the summit of another building, in order to give it elevation. Sometimes the steeple is executed in smooth and plain stone work, as in that of Morley just mentioned. Frequently its angles are decorated with crockets, as at Bunny in Nottinghamshire, Fig. 7. Plate XXIX. in imitation of the buds, which, as in the case of the door, would very naturally spring from these poles, whose lower extremities would be placed in the most advantageous position for promoting vegetation (Fig. 5). The spire has also been the subject of much elegant invention, in the forms given to the poles by various devices, and still more by the cage-work, similar to that of the windows, which has been introduced into the intervals between them, and which has been employed in decorating the tower supporting the spire. We shall return to this subject, after

Plate XXIX.

CHAP. II. taking a view of some ornamental devices, which the Gothic architects have derived from the principles we have already laid down, and which are conspicuously employed in the decoration of the steeple.

In the two cases last mentioned, the introduction of crockets is amply justified by the vegetation which might be expected to take place on rods so situated; but it is not upon the door and the steeple only that we meet with these indications; they frequently occur upon the summit of Gothic edifices, and in situations such that the boughs could not, by any stretch of imagination, be supposed to reach the ground. The circumstance, however, may be reconciled to all the rest, by attending to a practice followed at this day in Catholic countries; where, on Palm Sunday, and I believe on other festivals, the churches are decorated profusely, with boughs fresh torn from the trees, and covered with foliage. This practice agrees well with those wicker edifices, to which I have traced the origin of Gothic architecture; for this occasional decoration would completely harmonize with the more lasting effect produced by the actual vegetation of their boughs. Such decoration would be peculiarly welcome on the top of the main posts, to which the

rods of the roof and of the door were tied, which standing up in a heavy and abrupt manner, produce an effect highly incongruous with the airy lightness belonging to all the rest of the work. We find accordingly, that the very place where the summit of this post would appear, is occupied by a pinnacle, the origin of which, in its utmost details, may be traced to an original form, constructed upon the principles just pointed out, as follows:

OF THE PINNACLE.

PLATE XXX. Fig. 1. represents the bare summit of one of the posts just mentioned. In Fig. 2. four boughs torn from the tree, and covered with fresh buds, are applied to its summit, and bound to it in an upright position, and at equal distances, so that almost the whole of the bough stands up loose about the summit of the post. The loose ends are then brought together over its centre, and bound so as to constitute a very acute quadrangular pyramid, Fig. 3. Eight short boughs or twigs likewise budded, are then thrust into the binding already mentioned, in the manner shewn in Fig. 4. two on each of the four faces; the summit of each pair, being made to meet,

Plate XXX.

CHAP. II. so as to form a little frontispiece in an upright position, covering each base of the pyramid. This decoration is easily executed with real twigs, and has a finished and neat effect, as in Fig. 4. Its architectural representation is likewise very elegant, as may be seen wherever ornamental Gothic work occurs. Figs. 5. 6. and 7. are pinnacles of Ely, and Fig. 8. of York. The first two and the last in their upper part, very much resemble the wicker form in Fig. 4.; the stem, in conformity to masonry, is square, and dressed on all its four sides with mouldings or mullions, in relief according to the method last described. In Fig. 7. of the same Plate three pinnacles are grouped together, being one example of that unbounded variety produced by means of such boughs, which the Gothic architect felt himself at liberty to employ in whatever manner suited his purpose.

In taking a view of Gothic windows, we have seen with what fertility of invention these artists have availed themselves of every conceivable combination of cage-work; we shall now have occasion to witness their exertion of the same activity in other departments of the art, and in combining the whole under one harmonious system, by employing the same class of

forms to decorate both what was open and what was solid. They have been enabled to do so, by the comprehensive nature of wicker-work, embracing both the basket and the cage. In fact, every basket has for its basis a piece of cage-work in the ribs, round which the twigs are wattled; and the form of these ribs being visible in the closest piece of basket-work, the architect who assumed wicker-work as his prototype, was justified in decorating any piece of flat and unbroken stone-work with tracery, executed in relief, representing those ribs. On this occasion, the same design has been adopted, as in the tracery of some of the windows; most commonly that of the window of Westminster Hall (Plate XXIV.); and the same arrangement has been pursued, as to the mouldings and their subordinations; the decoration consisting of a half mullion as it projects from the glass, in some cases with strong projection, in others with a mere indication. Plate XXXI. shews an example of this arrangement in the gateway of Beverly Minster; the sides and summit of which are decorated with crocketed boughs, such as those last mentioned, disposed in various modes, now easily understood. The solid mass of stone-work immediately above the doorway, is

Plate XXXI.

CHAP. II. covered with tracery in relief, the upright ribs of which terminate, at the summit, in an open railway or battlement; a connection being thus established between what is solid, and what is open. A decoration of the same sort of tracery, in relief, is seen upon a smaller scale, on the door of oak, which occupies the gateway.

CHAPTER III.

More complicated examples of the Gothic style. Ornamental borders. Canopies. Tombs. General design of a Gothic edifice. Its deviations from the prototype accounted for. Of complicated roofs. Of complicated steeples. Cases of literal representation of the prototype. Examples of the proper architectural adoption of the original forms.

By the principles now laid down, the Gothic architect was furnished with resources for producing the richest decorations, and for exhibiting the most unbounded variety, without ever being tempted to deviate from those principles; at least I am induced to think so, from having found them amply sufficient to explain every specimen of Gothic work that has occurred to me for many years back. This fertility appears most conspicuously in cathedrals and other works, in which no expense was spared, and in which the architects seem to have prided themselves in carrying variety and intricacy to excess. It is only by a personal inspection of those complicated and highly finished works, that an adequate idea can be formed of the agreement between this theory and the facts explained by it; but I shall endeavour to suggest the

CHAP. III.

course in which such observations may be directed, by giving a few examples of the various classes, numerous specimens of which occur in every great work.

Borders. The variety of ornamental borders is very great, some of these are decorated with crockets, some with cusps. Plate XXXII. contains an assemblage of both kinds, which, I trust, are now sufficiently explained by having their supposed wicker originals placed beside each of them.

Plate XXXII.

Canopies. It will be seen with what attention and regularity the same subordination of mouldings, which was pointed out in the windows, has been observed in the most intricate of these decorations. The following examples will illustrate this species of composition. In Plate XXXIII. are shewn two very complicated works, one (Fig. 1.) is a canopy from the west front of King's College at Cambridge, formed almost entirely of an assemblage of budded boughs. And Fig. 2. is one of a series of canopies from the monument of Bishop Alcock in Ely Cathedral. It is composed partly of budded boughs, and partly of cage-work in relief. Of the same kind of workmanship are composed the stalls of all cathedrals, and all highly

Plate XXXIII.

Stalls.

ornamented chapels and tombs, every part of which may be traced to some of the objects lately described. Plate XXXIV. represents the monument of Bishop Bouet, in York Minster, in which this species of refinement is carried to its utmost pitch.

Plate XXXIV.

OF THE GENERAL DESIGN OF A GOTHIC EDIFICE.

HAVING traced to their rustic origin, all the forms of Gothic architecture in their state of utmost refinement and complication, I shall now take a view of the general design of those buildings. I have already admitted, in treating of the details, that the alleged imitation was by no means a literal one; but I have endeavoured to shew that the deviations were no greater than the nature of the materials employed might be expected to produce. In like manner, I hope now to shew, that similar deviations in the general design may be traced to a similar interference.

The form and distribution of the willow house would afford sufficient strength, when its size and the nature of its materials were maintained in their original rustic simplicity; but in transferring its forms to a vast edifice of stone, there would be an absolute necessity for deviating, in some respects, from that primitive

CHAP. III.

design, in order to bestow upon the work an adequate degree of stability. The simplest Gothic roof consists of two very heavy coverings; the undermost, which is seen from within, is constructed almost universally of stone. The other, which is opposed to the weather, is in England composed of lead; and generally in Scotland of flags very richly hewn, and so adjusted as to produce a good effect in the outline. Such weight could not fail to occasion a very strong thrust outwards; acting like a bridge upon its abutments. In order to resist this pressure, the architect has been reduced to the necessity of introducing buttresses placed on the outside of the wall.

Plate XXXV.

Plate XXXV. Fig. 1. shews an example of the simplest roof. Fig. 3. shews another example, in which, as is very common, the buttress terminates upwards, in a pinnacle, by means of which load, its power of resisting a thrust is augmented. Fig. 2. is a cross section of Westminster Abbey. In this construction, which is universal in cathedrals, the same device has been carried a great deal farther, owing probably to the necessity of the case, in consequence of the great size of such buildings. Buttresses have been erected at a considerable distance from the main wall of the

edifice, and the thrust of the roof has been resisted by means of flying buttresses, meeting the main wall in the manner best calculated to give effectual support to the roof. In all cases, the space immediately below them has been covered by a roof of its own, and the space beneath united to the rest of the edifice by a series of lofty open arches, and thus constituting what are called its side aisles. Each of these aisles has a groined roof, and a set of decorations similar to those of the nave or main part of the edifice. This is shewn in elevations of the outside and inside of the same building (Westminster Abbey) in Figs. 4. and 5. The introduction of aisles has, of necessity, given rise to two rows of windows, and sometimes, as in the present example, to three. The stucture is certainly bad in point of effect; the vast masses of masonry, of which the buttresses are composed, give to the work a heavy appearance, and the edifice, which in fact consists, within, of one undivided whole, is thus made externally to look like a house composed of two or three stories.

This disadvantage could not be entirely obviated; but every exertion seems to have been made, in order to disguise the buttresses, and give them a light

CHAP. III. appearance; and to effect this purpose, the architect has frequently represented them as pieces of cage-work, in conformity to the general principle which had been adopted; and by a method already pointed out. This is shewn in the buttress of St. Mary's, Beverly, Plate XXXVI. Fig. 1. which is one continued representation of cage-work with a pinnacle on its summit. He strove also to give lightness to the buttresses, by actually excavating them with niches and canopies; as in a buttress of York Minster, represented at full length in Plate XXXVI. Fig. 2. and on a large scale in Plate XXXVII.*

Plate XXXVI.

Plate XXXVII.

OF THE ROOF.

Roof. We can now return, with advantage, to the subject by which this investigation was first opened; the inside roof as seen from below. The ribs, which constitute its principal feature, bear the closest resemblance to the mullions of the windows. The cross section of one of these ribs being in fact the same as that of half a mullion cut off at the glass; they are

* The figure being divided in two, in order to save room; to do justice to the perspective, we must suppose the left hand figure to be placed on the summit of that on the right.

the same as to the variety, the subordination, and the mutual arrangement of the mouldings; and the same as to many of the forms which they assume, particularly those shewn in Plates XX. and XXI.

Considerable varieties take place at the impost, where the groins of the roof separate from the uprights. Here a bracket usually appears and seems to denote the binding by which the rods were confined in their places. Sometimes one bracket embraces them all; sometimes each rib has a particular small bracket of its own. This last arrangement seems to represent a mode of fixing the ribs by means of a rod wattled among them alternately. In some cases, the ribs are all of equal size; in others, they vary in that respect, and in the order of the mouldings.

Plate XXXVIII. shews the roof of the east end of the Temple Church. The aisles are equal in height, but not in size with the nave, and the ribs branch out on all sides. Plate XXXVIII.

Plate XXXIX. is a view of the chancel of St. Mary's, Beverly. Here the ribs, which form the groins of the roof, unite on the north side in a cluster at the impost, and are continued down the pier, forming with it one unbroken line, being destitute of either impost Plate XXXIX.

CHAP. III. moulding or capital; but on the opposite side they all enter into rings without appearing below them. They do not spring, as is usual, from the same circumference of one circle, but are distributed, as seen in the ground plan, Plate XL. Fig. 4. The arrangement produces this singular effect, that the ribs upon the south side cross each other at *a*, *b*, *c*, and *d*, whereas those on the north side diverge uniformly as at E, F, &c. a contrast which is curious, and which produces upon the south a striking resemblance to wicker-work. The mouldings of these groins are highly indented, and characteristic, as shewn in Fig. 5. Plate XL. Their strongly marked indentures produce a great effect in the crossings, and upon the north side all the mouldings except the most prominent, coincide and disappear in the body of the column; the upper fillet and mouldings of each groin only appearing, and producing by their assemblage a set of flutes not unlike those of a Corinthian column, Fig. 6. The diagonal arch is a complete semicircle, as I found by measurement.

Plate XL.

Similar methods have been employed with the most happy effect in the domes which are introduced, where the nave and the trancept cross each other in chapter-houses of octagonal form, and in other great rooms of

public assembly. The forms employed in cases of this kind, are often most ingenious and elegant. CHAP. III.

The most simple structure I have met with of this class, is the roof of the Dean's kitchen at Durham, Plate XLI. made up of eight semicircular arches springing from the angles of an octagon. The mode is also particularly represented in the ground plan, Fig. 1. Plate XL. The eight chords *a d, h e, a f, b e, c h*, &c. uniting every fourth of the angles of the octagon, *a b c d e f g h*, are each made the span of a vertical semicircular arch. These arches meet each other in sixteen points. The eight inmost of these (*i, k, l, m, n*, &c.) form an octagonal area on the summit, which is left open, and from which an octagonal lantern rises. From each of the eight outermost of these points, (*s, r*, &c.) a horizontal straight line *s z, r w*, is drawn from the centre outwards, these lines constituting the summit of a set of pointed vaults at right angles to each front of the octagon, and terminating on each of these fronts in vertical pointed arches, (*a z b, b w c*, &c.) thus completing the fabric. Plate XLI. Dean's kitchen, Durham.

Plate XLII. shews the roof of the Chapter-house of York. Here, as shewn in the ground plan, (Plate XL. Fig. 2.), we have four semicircular arches springing Plate XLII. Chapter-house, York.

CHAP. III. from, and connecting each pair of opposite angles, *a e*, *b f*, *c g*, and *d h*, thus crossing each other in a point *i*, immediately over the centre, *a e*, *b f*, *c g*, being the spans of the arches which thus lie in the entire surface of a hemisphere of which they are great circles.* Between each pair of neighbouring groins, an intermediate one *i*, *k*, &c. has been placed, extending along the hemisphere to *k* or *l*, from the centre *i*, half-way to the outside. Here a horizontal rib *k m n*, or *l p q*, strikes outwards, and meets three arches, as *f k*, *f m*, Plate XLIII. *f n*, from each of the imposts *b f*, &c. In Plate XLIII., this construction is shewn in wicker-work, as now standing in my garden.

Roof of Ely-minster. The roof of Ely-minster, where the nave and transcept meet, is formed upon a similar general plan, but Plate XLIV. is rather more complicated, as shewn in Plate XLIV. and ground plan, Plate XL. Fig. 3. A set of imposts, *a*, *b*, *c*, *d*, *e*, *f*, placed, as in the two last cases, in the angles of an octagon, support the whole structure. Over the centre is placed an octagonal frame of oak, supporting a lantern, the size of which is about one third of the lower octagon, the upper one having its

* In the last case they were likewise in a hemisphere, but of which they were small circles, the diameter of that sphere being *a*, *e*, Fig. 1.

angles, *i*, *k*, *l*, *m*, &c. corresponding to the sides *a b*, *b c*, *c d*, &c. of the other. From each angular point of the upper octagon, as *i*, *k*, *l*, &c. a horizontal rib, as *i r*, *q s*, &c. extends outwards, drawn from the centre. From each of the imposts of the lower octagon, *a*, *b*, *c*, &c. rise thirteen arched groins *a i*, *a q*, &c. branching inwards so as to support the roof and the upper octagon. These terminate in the angles and sides of the upper octagon, and in the horizontal ribs which extend outwards from them, *i r*, *q s*, &c. in such a manner, that the twelve intervals interposed between these arches are nearly of equal size. The lantern which rises from the small octagon has windows on every face, and is covered by a roof, which exhibits another variety of the general arrangement. Eight semicircular arches, *i n*, *k o*, &c. springing from the opposite angles, cross each other in the centre; and eight horizontal ribs, bisecting the angles between these arches, are carried outwards horizontally, and meet pointed arches, rising vertically from each face of the octagonal summit of the lantern, *i k*, *k l*, &c. Nine arches rise from each angle, as *p* or *q* of that summit, including the semicircles *i n*, *k o*, *l p*, &c. and the vertical arches just mentioned.

CHAP. III.

Consistency of Mouldings.

It is worthy of remark, that in these vast and intricate structures, the systematic order and arrangement of the mouldings are such, as to unite the whole, inside and outside, in one great design. For if we carry our eye across the mouldings, starting from the glass, either towards the inside or towards the outside, we shall observe throughout, the same consistency which we have already had occasion to admire, in the mullions and tracery of the windows; we are led inwards to the most prominent of the rods in the main pillars, and outwards to the extreme mouldings, which terminate the pinnacles on the buttresses.

Henry the Seventh's Chapel. Plates XLV. XLVI.

These various devices have reached the highest pitch of refinement in Henry the Seventh's Chapel of Westminster Abbey, represented in Plates XLV. and XLVI, as it stood in 1810; which, both within and without upon its solid parts, as well as in those which are open, presents to view one continued representation of cage-work; and in which the flying buttresses, distended by open hoops, are peculiarly interesting. The principle, according to my taste, has run, on this occasion to a pedantic excess, although the specimen is valuable, by furnishing the fullest possible illustration of the theory proposed in this Essay, and the severest

trial of its power in explaining all that belongs to Gothic architecture. CHAP. III.

OF THE COMPLICATED STEEPLE.

I HAVE already endeavoured to account for the plain octagonal spire, sometimes covered with crockets, and sometimes smooth. The spire of Newark, Plate XLVII. is finished, as to the pyramid itself, with plain rods, but a series of windows are introduced in four different levels, (four on each level,) and upon alternate faces. The upper part of each window is covered with crockets. This contrast between the plain rods of the pyramid, and the crocketed summits of the window, gives rise to much distinctness, and has a peculiarly good effect. At the base on the four faces, which answer to the corners of the square tower upon which the spire rests, a set of architectural forms make their appearance, representing four other rods pointing inwards, elevated at a smaller angle from the horizon than the main rods, and so placed, that, if produced, they would meet in the axis of the pyramid, at about one-third of its height. This seems to represent a very natural device for giving strength to the original wicker steeple, and in

Plate XLVII. Newark.

CHAP. III.

stone also contributes much to the strength of the work. Each of these four forms covering (as I am informed) an arch by which a face of the spire is supported. This form is represented, as executed in wicker-work in Plate L. Fig. 2.

Plate XLVIII. Batalha.

Plate XLVIII. is the steeple of Batalha, copied from Mr. Murphy's book. The general form is the same as that last mentioned, but having its angles decorated with crockets. The tracery which occupies the space between the ribs is complicated, but may be executed in wicker-work, as shewn in Plate XL. Figs. 7, 8, 9, and 10. The waving line may be produced by different methods, but the most natural appears to be that shewn at *a b c*, Fig. 7. A split rod is doubled upon itself by acute bends or folds, (as in the case already mentioned of the window of Chartham, p. 39. and Plate XVII.) at *b c d*, &c. Fig. 7, so as to give to the rod an angular fold at these points. Then being drawn out into the position *e f g h*, Fig. 8, and still more into the position *i k l m*, Fig. 9. Each position of the rod, which, at its first folding in the position, *a b c*, was straight, now becomes a curve of contrary flexure, *i o k*, and *k n l*, or in the complete structure in *p q r*, and *r s t*, Fig. 10. A rod thus bent, being

applied to each side of the space to be filled, *t y z x*, and these being kept asunder by straight rods, as *t x*, and *y z*, and the middle space, thus formed, being filled up by a set of hoops, *w w*, the form is complete. All other parts of this very complicated spire may easily be understood, after the explanation previously given, as no form occurs which has not been accounted for in some other situation. Thus the lower border has been explained in Plate XXXII. Figs. 9. and 10. The hoop containing quadrangular figures, differs only in the number of its folds from that explained in Plate XVI. Fig. 6. The cage-work of the part of the spire above the crown, is the same with that of the window explained in Plates XVIII. &c. CHAP. III.

Plate XLIX. is the steeple of St. Nicholas in Newcastle upon Tyne; one of the boldest and most beautiful works of this or any other style. It admits of an easy construction in wicker-work, as I have found in practice, and shewn in Plate L. Fig. 1. From the opposite corners of the tower, rise two arches, probably elliptical, having the two diagonals of the square for their span, and crossing over the centre. Upon these open arches stands an open square lantern, having its sides parallel to those of the main tower, Plate XLIX. St. Nicholas, Newcastle. Plate L.

CHAP. III. and of about half the size. From each angle of the main tower, a rod is led up with contrary flexures to the corresponding angle of the lantern, in such a manner as to be a tangent to both vertical lines, and also to the cross arch above described, with the lower part of which it coincides. In continuation upwards of this last mentioned rod, a pinnacle rises from each angle of the lantern. Upon the summit stands a common octagonal spire, with its angles crocketed. A pinnacle placed on an octagonal turret also rises from each angle of the main tower, and a smaller one from the middle; each face of the main tower has two windows side by side, the middle pinnacle rising over the solid space which lies between them. This tower terminates in a border, formed by prolonging the ribs of the wattling, and cutting them unequally, as seen in the Figure, Plate L., producing an effect, not unlike that of battlements on a tower, but here in very obvious imitation of rods.

The rods of contrary flexure, which rise between the corners of the tower and of the lantern, are covered with crockets, and are meant, I conceive, to represent poles, having their lower extremities planted in the ground, and in a state of full vegetation.

LITERAL IMITATIONS OF THE PROTOTYPE.

THE arguments in favour of the modified imitation of wicker-work, which have been maintained in the course of this Essay, derive additional strength from some cases which occur in stone-work, of literal representations of that primitive mode of construction.

Fig. 1. Plate LI. shews a gateway of semicircular form in the inside of the cloister of Durham Cathedral, upon which we find, intermixed with various architectural mouldings, three distinct representations of rods covered, at regular intervals, with little branches lopped off, at a small distance from the stem. The middle one has its little branches standing in pairs; on the other two they stand single, and point towards the middle rod. Plate LI.

Plate LII. is copied from the drawing of a gate of St. Michael's in the Azores, taken upon the spot by my son, Lieutenant Basil Hall, R. N. It must be considered as a Portuguese work; as it is upon record, that the stones employed in building it were brought, ready hewn, from Portugal. It is valuable on the present occasion, as exhibiting, along with other specimens of the same sort existing in those islands, a Plate LII.

CHAP. III. specimen of literal imitation, along with architectural modification, by which a striking confirmation is given to our views.

In Mr. Murphy's publication of the monastery of Batalha, another Portuguese work, several similar examples, the most distinct of which is his Plate I. Fig. 21. (in ours, Plate LI. Fig. 2.) Mr. Murphy calls it a "window in the Arabian style of architecture sketched from the Royal Palace of Cintra near Lisbon." Why this work is ascribed to the Arabian style is not said; all we know is, that it exists in Portugal, and that it contains those forms peculiarly belonging to the Gothic style. Without paying any regard to its history, we may avail ourselves of it, on the present occasion, along with the last mentioned examples. Upon this work, a set of boughs occur decorated with little branches, exactly like those on the arch (Fig. 1.) in Durham Cathedral. In all these examples, we have in a great measure a *fac-simile* of wicker-work, with a slight intermixture of the architectural forms usual in the Gothic style. Thus in Plate LII. we have cusps under the arches, and the buttresses on the side are terminated upwards by decided pinnacles; also on the same building we have the literal

Plate LI.

representation of branches, twisted round each other in a spiral form. CHAP. III.

Plate LIII. shews the window in the Church of Dorchester representing the family tree, or the root, as it is called, of Jesse. The tracery, when seen from within, (Fig. 2.) exhibits the literal representation of branches covered with leaves, springing from a common stem; and on the outside (Fig. 1.) we see the same tracery executed with the mouldings the same as those of a plain Gothic window. Plate LIII. Window of Dorchester.

In Plate LIV. is a window of the chapter-house of Batalha; the whole tracery of which exhibits the most literal representation of boughs covered with leaves interwoven together and bound by ropes, also represented in the most unequivocal manner. This window stands in the midst of work decorated with all the mouldings usual in Gothic architecture, which are nowhere more completely adhered to than in this edifice. Plate LIV. Window of Batalha.

Upon the principles laid down, the architect may be blamed for the execution of some of these late examples, as exhibiting too servile copies of the representation of the prototype. The circumstance, however, is of service on the present occasion, as furnishing a direct proof of the position maintained in this Essay.

CHAP. III. That wicker-work has been imitated in some of these works, cannot, I conceive, be disputed; and these again are connected by so many intermediate specimens with others possessing all the usual attributes of the style, that it seems not easy to say where to stop, or how to deny the existence of a character in one extreme of the chain, which cannot be refused to it in the other.

I shall conclude this descriptive part with two examples, in which the intermixture of art with nature seems to have been most happily employed. One is a view of York Minster, Plate LVIII. and the other of Melrose Abbey, Plate LIX.

Plates LVIII. LIX.

CHAPTER IV.

Opinions of various Authors on the origin of Gothic Architecture. Opinion of Dr. Warburton; an avenue of living trees. Opinion of Mr. Gray; interlacing arches; argument derived from these arches in favour of the system of wicker-work. Opinion of Governor Pownal. Opinion of Mr. Murphy. Opinion of Mr. Grose. Recapitulation of the Theory advanced in this Essay.

HAVING stated at full length my own views as to the origin of Gothic architecture, I shall now examine the various opinions that have been advanced by others upon that subject.

Dr. Warburton.

The most popular of these opinions may be traced to Dr. Warburton.* It consists in ascribing all the Gothic forms to the imitation of an alley of living trees, the branches of which meet, and cross each other overhead.

This theory is very far from embracing the whole truth, or from affording a satisfactory solution of the question at large. The branches of the living trees meeting and crossing overhead, furnish some account of the pointed arch; and others meeting and rising

* See his Notes on Pope's Moral Essays, Epistle iv. V. 29.

CHAP. IV. together, may sometimes shew a form like that of the Gothic door. The branches spreading out on all sides from each stem, bear a certain loose resemblance to the groined roof; and above all, the vegetation which may be looked for any where, upon living trees, seems to correspond to the crocket-work, so general in finished pieces of Gothic architecture.

So far, and no farther, does this theory agree with facts; but it fails when applied to other departments of the style. Thus it does not at all apply to the clustered column, nor to the horizontal groins, or ridge-bars, as I have called them, of the roof; nor does it afford any explanation of the steeples, nor of the pinnacle, nor of any of the ornamental borders; and it is not at all applicable to the tracery-work, which constitutes so conspicuous a part of the style; whether employed in the windows, or as a decoration, in relief, on the surface of solid masses. Upon the whole, this theory of the avenue possesses a certain loose degree of plausibility, when stated in general terms, but which dies away when the subject is submitted to a close examination. In so far as living branches are concerned, there is some resemblance between this theory, and that which is the subject of

the foregoing Essay; and in a superficial view, they have been sometimes confounded together, but I trust that the attentive reader will see, that there is a wide difference between them.* CHAP. IV.

Mr. Bentham, in his History of Ely Cathedral, has introduced an opinion concerning the origin of the Gothic arch, which had been suggested to him (as he informed me,) by Mr. Gray the poet, and which has been adopted by many late writers on this subject, in particular by Dr. Milner, in his late publication on the Ecclesiastical Architecture of England during the middle ages. Chap. V. p. 77. Opinion of Mr. Gray.

According to this theory, the Gothic arch has been suggested by the construction of interlacing semi-circular arches crossing each other, and resting upon a set of columns, standing in a row at equal intervals; and placed against a bare wall by way of ornament, and in order to decorate a flat vacant space. "Then Interlacing arches.

* Should any one, notwithstanding what has been said, be still at a loss to distinguish the two, I must request of him to submit the question to the following test: Let him fix his attention upon one of the groins in the roof of a church, and let him follow it with his eye downwards and upwards. In following it downwards, he will be led by a rib of unbroken continuity to one of the rods which constitute the stone-work of the clustered column, similar to that in the wicker fabric, but of which no trace occurs in the avenue. Following the same rib upwards, he will soon arrive at one of the horizontal ridge bars, which bears no resemblance to any part of an alley of trees; but which, in every Gothic roof, and in the wicker fabric, constitute an essential part of the structure.

CHAP. IV. so much of it," says Mr. Bentham in the passage just alluded to, " as lies between the legs of the two neighbouring arches, where they cross each other, is pierced through the fabric, and forms a little range of sharp-pointed windows." In this manner a pointed arch is formed; and has thus, it is conceived, been introduced into architecture.

The explanation, here attempted, applies to no part of Gothic architecture but the pointed arch. And even were this theory established as firmly as its most sanguine friends could desire, it could not be considered as affording a solution of the question, since these interlacing arches would themselves still remain to be accounted for. This subject, however, is well deserving of attention in this place, since the form under consideration is intimately connected in various ways with the Gothic style, and affords a very powerful confirmation of the opinions advanced in this Essay. It will appear, when we examine these arcades, that they may be traced to a wicker origin along with all the Gothic forms, and, in general, with the same modified imitation. But some specimens of this set occur, in which that modification has been dispensed with, and in which circumstances are

introduced which enable us to rank them among the literal imitations of the prototype. CHAP. IV.

Fig. 1. Plate LV. is a representation of an interlacing arcade on Kelso Abbey. The arches, which are of the old Saxon form and character, spring from the same line of front, Fig. 6. Plate LVI. *d c g*; but at the point of their crossing, the substance of one of the arches *a c* advances beyond that line *d c g*, and that of the other *d b* retires behind it, producing a distance between them, *a b*, of about one inch, the span of each semicircle being about five feet, and where *b c g*, the continuation of *d b*, just mentioned, crosses the neighbouring arch *c f*; the point *e* is as much advanced before *f*, as *a* had been before *b*. The consequence is, that if a vertical plane were raised through *d* and *g*, it would be found that the arch *d b e g* retired behind that plane at *b*, and advanced before it at *e*, meeting it at the points *d* and *g*, and crossing it at some point above *c*, consequently that each of these semicircular arches performs a waving line, being at one part, *b*, concave to the front, and at another, *e*, convex to it. Plate LV. Plate LVI.

To execute such a form in stone must have been extremely inconvenient, and contrary to the habits of persons employed to cut the usual Saxon arches, each

CHAP. IV. of which invariably lies in one plane. We must therefore ascribe the circumstance to some peculiar motive, and that motive could only be the desire of imitating a set of interlacing arches, formed of some flexible substance. As nothing can be conceived less flexible than a Saxon arch, we are therefore compelled to look elsewhere for the model of this form. We find it in a set of semicircular willow rods thrust into the ground, in one straight line, and made to interlace each other, as in Fig. 1. Plate LVI. which would be forced to assume exactly the form already described, belonging to the stone-work. This appears clearly in the two projections in Figs. 2 and 3; Fig 2, as seen by looking down; and Fig. 3, as looking up. The same letters being employed as in Fig. 6. the corresponding convexity and concavity may be traced in all of them.

I am inclined to look upon the interlacing arch as a Gothic, and not as a Saxon idea, and to derive it from the origin which I have ascribed to the Gothic style. The same idea has frequently been adopted in ornamental Gothic work, as already shewn in Figs 11. and 12. Plate XXXII. among the ornamental borders, only that in the stone-work, Fig. 11. the arches in

crossing each other, incorporate without overlapping. But this again agrees with interlacing arches as they are sometimes executed, for instance, on Durham Minster. CHAP. IV.

Another set of interlacing arches, which occur in the neighbourhood of Kelso, at the Abbey of Dryburgh, Fig. 2. Plate LV. and in projection Fig. 5. Plate LVI. affords a very strong confirmation of this view of the subject. They consist, as at Kelso, of a number of semicircular arches, which interlace and overlap; but here the stone-work is executed so as exactly and literally to represent arches formed each of a bundle of rods, like those in Fig. 4. Plate LVI. Plate LVI. Intermixed.

It is not easy to conceive a stronger confirmation than is here furnished of the principle advanced in this Essay. The stone-work actually represents a set of bundles of rods mutually interlacing each other, in the very manner we have conceived them to do in the original wicker edifice; the general and modified imitation of which has (according to that theory) given rise to the whole system of Gothic architecture.

In a paper, published by Governor Pownal, in the Archæologia, Vol. IX. p. 121, the origin of Gothic architecture is ascribed to the imitation of a building Opinion of Gov. Pownal.

CHAP. IV.

executed in timber frame-work. But this hypothesis accounts for the Gothic arch alone, and that, not in a very satisfactory manner, the theory being quite inapplicable to any other part of a Gothic structure.

Opinion of Mr. Murphy.

Mr. Murphy, in the dissertation which accompanies his views of the monastery of Batalha, gives it as his opinion, that the Gothic architecture is founded essentially on the pyramidal form so conspicuous in all parts of works of this style. He says (Introduction, page 3.) "Each of the buttresses and turrets are crowned with a small pyramid. If niches are introduced, they are crowned with a pyramidical canopy. The arches of the doors and windows terminate in a point, and every little necessary ornament, which encircles the whole, has a pointed or angular tendency. Spires, pinnacles, and pointed arches, are always found to accompany each other, and clearly imply a system founded on the principles of the pyramid." Mr. Murphy likewise endeavours to assign a cause for the general use of the pyramid, from the circumstance of the spire having been introduced in the 12th century about the same time that the practice became general over Europe of burying in churches; for he supposes that, by the pyramidal form, it was

meant to denote that the church was used as a cemetery, at the same time, that its form of a cross indicated its employment as a place of Christian worship: And further, that this representation was borrowed from the ancient Egyptians, who placed the pyramid over their cemeteries as denoting the soul under the emblem of a flame of fire, (whence it is supposed to derive its origin) thus to testify their belief of its immortality.

In favour of this ingenious view of the subject, it must be acknowledged, that a great many of the Gothic forms are pyramidal, and that a disposition to a pointed form prevails in most branches of the art. But this principle alone, goes but a little way in accounting for the Gothic forms in general, as by means of it we can obtain no solution of the clustered column and the branching roof, nor of any of their various peculiarities: nor does it in any manner explain the open work of the windows, and of other parts, nor any of the various ornaments, which we meet in great abundance in all Gothic works. Although therefore we were to admit the truth of Mr. Murphy's opinion, so far as it goes, it would still be greatly defective as a system.

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On the other hand, it is not impossible but some idea like what he has suggested, may have given rise to the introduction of the steeple, the employment of which, in point of utility, as connected with the wicker fabric, has not appeared distinctly, though we have clearly traced its origin to a structure formed of poles and twigs. Perhaps in that original state, it may have served to denote a cemetery, or perhaps it may have been intended by its height to serve as a guide to the place of worship.

The resemblance which a Gothic building bears to a house constructed of rods, is, in many cases, so striking, that I am surprised the subject has not long ago been viewed in this light, yet I have not seen any hint of the kind, except in a passage of a work of the late Mr. Grose, which I met with two or three years after I had carried these investigations to a considerable length, in which the author shews that he has observed the resemblance in question, but without being aware of the consequences to which it led. The passage stands as follows. "The marks which constitute the character of Gothic or Saracenical architecture, are its numerous and prominent buttresses, its lofty spires and pinnacles, its large and ramified

Opinion of Mr. Grose.

windows, its ornamental niches and canopies, its sculptured saints, the delicate lace-work of its fretted roofs, and the profusion of ornaments lavished indiscriminately over the whole building; but its peculiar distinguishing characteristics, are the small clustered pillars and pointed arches, formed by the segments of two intersecting circles, which arches, though last brought into use, are evidently of a more simple and obvious construction than the semicircular ones: two flat stones, with their tops inclined to each other, and touching, form its rudiments; a number of boughs stuck into the ground, opposite to each other, and tied together at top, in order to form a bower, exactly describe it: whereas a semicircular arch appears the result of deeper contrivance, as consisting of more parts; and it seems less probable, chance, whence all these inventions were first derived, should throw several wedge-like stones between two, set perpendicularly, so as exactly to fit and fill up the interval."*

Much as the authors of these various theories differ from each other, they all agree in looking upon the forms of Gothic architecture as derived from some regular system, and not as the wild productions of

* Grose, Antiq. of England and Wales, p. 75.

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fancy. In their application to the fact, each of their theories is more or less successful in explaining some parts, while it fails when applied to others. Thus none of them answer in speculation to unite together all the different branches of the art, nor could serve in practice as a guide to the artist.

Recapitulation.

In this Essay, the same object has been aimed at. The construction of the Gothic roof has been traced to the imitation of a fabric made of rods in all its numerous varieties, from the simplest to the most complicated; the same has been done, with respect to the window, which receives no solution, even in its simplest cases, from any other of the theories mentioned. The steeple in all its forms has been exhibited in wicker-work; and the pinnacles, the niches, the canopies, the stalls, and all the ornamental borders, have been traced to decorations, formed of twigs covered occasionally with buds. The cusped ornament has been traced to bark in decay; and it has been shewn, with what exquisite skill, the whole has been united, and subjected to the rules of architectural symmetry, by the system of mouldings, arising naturally out of the employment of stone.

Throughout the long and intricate series of compo-

sitions examined in this work, I hope to have shewn that one simple design, founded upon the origin assigned to the style, has every where guided the hand of the artist; so as to give to the whole an air of the utmost harmony and consistency. And it is not a little remarkable, that in the most complicated cases of florid Gothic, in which the execution has been carried to a pedantic degree of intricacy, the influence of the same principle may be traced still more decidedly than in the most simple; proving, that even in their excesses these artists have never lost sight of their original. Can it be conceived that such order and consistency have been the work of chance? or have arisen, as some have alleged, out of the casual corruption of other styles of architecture? Where an obvious source presents itself, to which all these forms infinitely varied in all other particulars, and agreeing in this alone, can easily be traced, may we not presume that the genuine origin of the style is discovered?

In this discussion, I beg to appeal to the judgment of the reader, founded, not upon the few facts which have been here brought forward; but upon that multitude, which these suggestions, I trust, will lead him to discover or to recollect.

CHAP. IV. I shall now state very shortly what seems to have been established beyond dispute, and upon the best authorities, with respect to the history of Gothic architecture, in which statement I have availed myself largely of Mr. Bentham's Introduction to his Account of Ely Cathedral.

CHAPTER V.

History of Gothic Architecture in successive ages. Authority of Sir Christopher Wren for ascribing the Gothic style to the Free-masons. Supported by Governor Pownal,—and by Mr. Walker. Sir C. Wren's opinion as to the Saracens, controverted. Legendary accounts of early fabrics in wicker-work. At Durham. At Glastonbury. Name of Gothic architecture not derived from the Gothic nation. Conjecture as to its origin. Injustice done to the style, by ascribing it to barbarous times.

CHAP. V. History.

PREVIOUS to the introduction of the mode of building now in use, three different styles of architecture have, in their turns, prevailed in this country.

The first was used by the Saxons, and seems to have come by tradition from the Romans, since it resembles their works in some essential particulars, and was known among the Saxons themselves by the name of the Roman manner; its characteristic is a small semicircular arch, covered with a running zigzag ornament, as may be seen in the old conventual church of Ely, which is looked upon as one of the most perfect monuments of this style.

The next, in point of antiquity, may be called the Norman style of architecture, as it came into England

CHAP. V. about the time of the Norman conquest in 1066. It is true, that a work of this kind was executed by the Saxon King Edward the Confessor, but Mr. Bentham alleges, that he had brought the idea from Normandy, where he had received his education. This style differs from the Saxon only in size, its form being the same, but executed on a colossal scale. A great many vast edifices of this sort were erected in the century immediately following the conquest, during which period the most solid and massy part was built of most of the cathedrals in England, though they were finished in the following ages in Gothic style producing a set of motley structures.

The third style of architecture is that, which has furnished the subject of this Essay. It seems to have made its first appearance in England towards the middle of the 12th century, during the reigns of Stephen and of Henry II. The earliest building in which I have been able to trace the Gothic style, is the western part of the Temple church in London, built A. D. 1155. Here we have the pointed arch, though some circular arches occur in the same building. Likewise a set of rods executed in stone, represented as passing through rings fixed in the wall,

rise from the ground along the inside of the lantern, and meet at top. Round the inside of the same edifice, is executed a set of little columns crowned with interlacing arches, which have been fully described above. I have observed the same union of single rods and interlacing arches in other buildings, constructed about the same period, in particular upon the outside of the old church of Kelso. By these interlacing arches a compromise seems to have taken place between the rising and the declining art, since they exhibit the massy structure and peculiar ornaments belonging to the Saxon, along with circumstances strongly characteristic of a flexible material indicating a connection with the Gothic, as has been fully shewn in page 93 and Plate LV.

It appears by Price's account of Salisbury cathedral, that the edifice was begun early in the 13th century (A. D. 1219,) and was not finally completed till towards the close of it (A. D. 1280, pages 7 and 32.) During that period, the art seems to have undergone a material change, as the lower and most ancient part of the church, though purely Gothic, is plain, having neither pinnacles upon the buttresses, nor tracery work in the windows, nor any of the small ornaments;

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whereas upon the steeple and other parts, executed at a later period, many of the refinements of the art are introduced.

During the course of the 13th, 14th, and 15th centuries, Gothic architecture seems in most parts of Europe, to have superseded every other mode of construction. In that period (as is well pointed out by Mr. Warton in his observations on Spencer's Fairy Queen), the art underwent a gradual progress of refinement, which was carried at last to a pedantic excess, producing what, by many authors, has justly been called the Florid Gothic. One of the most remarkable examples of which is Henry the Seventh's chapel in Westminster Abbey.

In England, Gothic architecture kept its ground till the Reformation; the works of Cardinal Wolsey being all executed in that style. But at the dissolution of the monasteries, (A. D. 1538,) a stop was, of course, put to all works of the kind. And when church building began again to revive, the art had taken a new direction, architects from that time to the present having endeavoured to work after the manner of the Greeks and Romans.

During the three centuries in which it prevailed

exclusively over the greater part of Europe, its principles remained fixed and unchanged, in passing through a multitude of hands, eager to outdo their predecessors and their rivals, by the novelty as well as by the elegance of their compositions. Such a conformity cannot be accounted for, but by supposing that the artists were guided in their work by some principle known to them all, and handed down from one generation to another. But that no such principle has reached our knowledge, is proved by the various unsuccessful attempts which have been made of late to explain the forms of Gothic architecture, and to reconcile them to each other; we must, therefore, conclude, that if there had been any such principle, it was known to the artists only, and concealed by them from the rest of the world. In order to determine this point, it is necessary to enquire by whom the art was practised. In that view, I shall refer, in the first place, to Sir Christopher Wren, an authority of great weight.

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Secrecy.

" He was of opinion," (says his son, Mr. Wren, Parentalia, page 306. folio 1750, London,) that what we now vulgarly call the Gothic, ought properly and truly to be named *Saracenic Architecture*, refined by

Saracens.

CHAP. V. the Christians, which first of all began in the East after the fall of the Greek Empire, by the prodigious success of those people that adhered to Mahomet's doctrine, who, out of zeal to their religion, built mosques, caravansaras, and sepulchres, wherever they came.

"These they contrived of a round form, because they would not imitate the Christian figure of a cross, nor the old Greek manner, which they thought to be idolatrous; and, for that reason, all sculpture became offensive to them.

"They then fell on a new mode of their own invention, though it might have been expected with better sense, considering the Arabians wanted not geometricians in that age, nor the Moors, who translated all the most useful old Greek books. As they propagated their religion with great diligence, so they built mosques in all their conquered cities in haste. The quarries of great marble, by which the vanquished nations of Syria, Egypt, and all the East had been supplied with columns, architraves, and great stones, were now deserted. The Saracens were, therefore, necessitated to accommodate their architecture to such materials, whether marble or free stone, as every

country readily afforded. They thought columns and heavy cornices, impertinent, and might be omitted: and, affecting the round form for mosques, they elevated cupolas, in some cases, with grace enough. CHAP. V.

"The holy wars gave the Christians who had been there, an idea of the Saracen works, which were afterwards, by them, imitated in the West; and they refined upon it every day as they proceeded in building churches. The Italians, (among whom were yet some Greek refugees), and with them, French, Germans, and Flemings, joined into a fraternity of architects, procuring papal bulls for their encouragement, and particular privileges. They styled themselves Free-masons, and ranged from one nation to another as they found churches to build, (for very many in those ages were every where in building through piety or emulation.) Their government was regular; and where they fixed near the building in hand, they made a camp of huts. A surveyor governed in chief, every tenth man was called a warden, and overlooked each nine; the gentlemen of the neighbourhood, either out of charity or commutation of penance, gave the materials and carriages. Those who have seen the exact accounts in records of the charge of the fabrics Free-masons.

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of some of our cathedrals, near four hundred years old, cannot but have a great esteem for their economy, and admire how soon they erected such lofty structures.

"Thus they made their pillars of a bundle of little torus's, which divided into more when they came to the roof, and then these torus's split into many small ones; and, traversing one another, gave occasion to the tracery work (as they call it) of which this society were the inventors. They used the sharp pointed arch, which would rise with little centering, required lighter key-stones, and less butment, and yet would bear another row of double arches, rising from the key-stone; by diversifying of which, they erected eminent structures, such as the steeples of Vienna, Strasbourg, and many others."

Eastern origin little probable.

In this passage, Sir C. assigns no satisfactory reason for tracing the origin of Gothic architecture to the Saracens. No inference can be derived from the round form of their mosques, which, in the Gothic, is seldom if ever to be met with; and he seems to have been led to this opinion by the circumstance of the Gothic style having made its appearance about the time of the Crusades.

On the other hand, this opinion is not confirmed, but rather refuted, by the accounts of travellers. Mr. Bentham says, that no Gothic work has been found in the East, but in places frequented, in some period, by Christians, who may have erected these buildings. And, we learn with certainty, by Mr. Swinburne's Travels in Spain, that the style of one race of Saracens, the Moors, who possessed the southern parts of that kingdom, was totally different from the Gothic. The characteristic of their architecture is a horse-shoe, or more than a semicircular arch, which prevails in all their works, from the mosque of Cordova, built A. D. 800, to the palace of Alhambra in Granada, begun about the end of the 13th century, and receiving additions till the end of the 15th. The ancient mosque of Cordova has not the least resemblance to Gothic.—A single glance at Mr. Swinburne's very elegant plates is enough to shew that the two styles of architecture are entirely different. The Moorish kingdom of Granada having lasted from A. D. 712 to A. D. 1492 it is obvious that it flourished during the three centuries in which Gothic architecture prevailed in Christendom. A few pointed arches occur in the Alhambra; but from the date of this fabric it is probable that they

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were borrowed from the pure Gothic works which at the same period were carrying on in the Christian provinces of Spain.

Sir Christopher, who was Surveyor General of all works of architecture carried on in the kingdom, and at the same time, a man of learning and curiosity, was led to examine the old records, to which he had free access. Being likewise, for many years, the leading man among the Free-masons, and their Grand Master; we may consider his testimony in this question, as the strongest that the subject will admit of.

Sir Christopher a strong authority in favour of Free-masons.

In an Essay written by himself (published in the Parentalia), in which he explains the methods followed by him in building the dome of St. Paul's, he has the following passage still stronger in favour of this opinion, relating to the Free-masons. After stating the precautions taken by the ancients, to support the roofs of their buildings, "The Free-masons," he says, "were not very solicitous about this, because they used buttresses on the outside of the wall, which they extended as far as they guessed would be sufficient; and they had yet further helps by loading the butresses with a pinnacle, to the height of which they were not confined."* The architecture here pointed out, as

* Parentalia, page 356.

practised by the Free-masons in contradistinction to the Romans, being decidedly what we call Gothic, it is quite obvious, that Sir Christopher Wren considered Gothic architecture as belonging to the Free-masons exclusively. CHAP. V.

Same opinion supported by other authors.

Of late, the same opinion has been maintained by Governor Pownal in the Essay, quoted above, page 95. After speaking of the corporation of Free-masons, established by Papal bulls about the early part of Henry the Third's reign, (which date corresponds to the first appearance of Gothic architecture), he says, that there are good grounds for "referring the invention and introduction of this bold and very highly scientific order of architecture, to those chosen and selected artists."

Mr. Walker, in his tour through Germany, Italy, and France, after speaking with great admiration of the steeple of Strasbourg, says, (page 86) "How much it is to be lamented, that the noble art of masonry has little left among us, but its forms and ceremonies! The reason, no doubt, why these artists had their lodges and secret meetings, was for the wise purpose of keeping their geometry and information a secret from the rest of the world."

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Having thus traced Gothic architecture to the Freemasons, we need not be surprised that the theory and principles of this style, should at this day be a problem among us; although in old times they had been so strictly adhered to, and so widely diffused during a course of ages. We may thus too, in some measure, account for the obscurity which covers the first introduction of Gothic architecture, and its early history. For we are informed by Preston, (page 241) "that many of the fraternity's records of this, (Charles II.) and the preceding reigns, were lost at the Revolution; and not a few were too hastily burnt in our own times, by some scrupulous brothers, from a fear of making discoveries prejudicial to masonry." On this occasion, many curious documents were probably lost for ever, and it may be supposed that the same spirit has led the masons of all times to conceal or destroy such ancient records, as tended to throw light on their rules of construction; which before the invention of printing they could do with ease.

The obscurity thus accounted for.

EARLY BUILDINGS IN WICKER WORK.

Wicker fabrics in early history of the Church.

Owing to this cause, combined perhaps with others unknown to us, every thing relating to the early

history of Gothic architecture is buried in deep obscurity; the subject being as yet untouched, and open to the investigation of the curious. If the theory now proposed has any foundation in truth, there is reason to expect that it may contribute much towards the progress of such investigations, since by means of it many passages in old authors may be clearly explained, which have been hitherto considered as defective, or void of meaning from their obscurity. Likewise facts are not wanting, which furnish the grounds of some general conjecture in support of this expectation; although too many links of the chain are deficient to authorise me in bringing forward any of them with great confidence. CHAP. V.

Thus I had often heard, that the first rude structures of Glastonbury and of Durham, erected in the earliest ages of Christianity, were formed of wicker-work; and tracing these anecdotes to their source, I have found them more directly to the point than I expected.

In Simeon of Durham, I find the following account of the miraculous foundation of Durham cathedral. As the monks who took charge of the body of St. Cuthbert were carrying it across the country, it stood fast, like a mountain, in the neighbourhood of the spot Foundation of Durham.

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where Durham now stands, and could not be moved by any human force. After much fasting and praying, it was revealed to one of the monks in a dream, that the body should be carried to a place called Dunelm, now Durham, which was immediately undertaken, and the body was found to move with ease. "With joy and thanksgiving they immediately carried the holy body to the spot pointed out by heaven, to wit Dunelm, and having hastily erected a little church *made of rods,* they placed it there in a temporary deposit."*

Also of Glastonbury, according to Dugdale.

Dugdale's book, entitled *Monasticon Anglicanum,* begins with the following passage relative to the foundation of Glastonbury; quoted from an old manuscript history of Glastonbury in the Cottonian library. The importance of this passage is so great on this occasion, that I became anxious to verify its authenticity in every way, and prevailed upon a friend, on whose accuracy I can rely, to examine the original manuscript in the British Museum, and compare it with Dugdale's quotation. The passage in the

* "Itaque ad locum coelitus ostensum, viz. Dunelmum, cum lætitia et laude corpus sanctum detulerunt factaque citissime de virgis ecclesiola ibidem illud ad tempus locarunt."—*Sim. Dunelm,* P. 27.

note, was copied literally by Mr. Ellis, from the manuscript. CHAP. V.

Supported by authority of old MS. history.

* " In the thirty-first year after the crucifixion twelve disciples of St. Philip the apostle, of whom Joseph of Arimathia was head, came into this land, and preached the doctrines of Christianity to King Arviragus, who denied them. But they obtained from him this spot with twelve hides of land, whereon they erected the first church in this kingdom, the walls of which were made of twisted rods, and which Christ, in honour of his Mother, and as a sepulchre for his servants, personally dedicated. This church on account of its antiquity, was called by the Angles Ealdechirche,

* " Anno post passionem Domini tricesimo primo, duodecim ex discipulis sancti Philippi apostoli ex quibus Joseph ab Arimathia primus erat, in terram istam venerunt. Qui regi Arvirago renuenti, Christianitatem optulerunt. Tamen locum istum cum duodecim hidis terræ ab eo impetraverunt. In quo *virgis torquatis* muros perficientes, primam hujus regni construxerunt Ecclesiam, quam Christus in honore sue matris et locum ad sepulturam servorum suorum presencialiter dedicavit.———Hec Ecclesia pro sui antiquitate ab anglis Ealdechirche id est vetusta Ecclesia dicebatur. Satisque constat homines istius provincie nullum sanctius aut crebrius juramentum habuisse, quam per veterem Ecclesiam, nihil magis vitantes metu sceleris vindicte quam perjurare. Est enim omnium in Anglia Ecclesiarum prima et vetustissima, primo ex *virgis torquatis* facta, ex qua virtus divine sanctitatis jam inde a principio redolevit spiravitque in omnem patriam. Et quamvis ex deformi fuerat materia facta, grandis tamen habebatur reverencie cultu; et sicut locus iste multa subnixus est reverencia antiquitatis, ita magnifice preeminet privilegio Sanctitatis; *Roma* etenim secunda vocatur." *Monasticon Angl.* P. 1. Cott. MS. Tib. A. V. fol. 1. and fol. 5. b.

CHAP. V. that is old church. And it is well known that the inhabitants of that province make use of no more solemn or more usual oath, than to swear by the old church; nor is there any which they would consider as deeper perjury to violate. For it is of all the churches in England the first and most ancient; first made of *twisted rods*, from which a divine odour of sanctity spread its perfume over all the world; and though made of mean materials, was held in the highest veneration for its sanctity. And this spot, so peculiarly eminent by its venerable antiquity, is no less conspicuous, by the pre-eminent privilege of its sanctity; for it was called a second Rome." *

* Since this work went to press, I have met with a copy of Spelman's *Concilia*, published in London in 1639, in which, on page 11, he has given a representation of the Old Church of Glastonbury, according to the idea which he had formed of it by conjecture, founded upon old traditions and authorities. The resemblance which this figure bears to some of those employed in this Essay to illustrate the theory of Gothic architecture, is so striking, that I am tempted to add one to the number of Plates, by introducing in Plate LVII. a *fac-simile* of it with its letters of reference, and explanatory notes. What gives particular importance to this confirmation of our statement as to the construction of that primitive edifice, is, that the opinions of this very respectable Antiquary, were formed without any view to the theory of Gothic architecture, or to any theory whatever, his wish being merely to ascertain the state of the fact.

The measures in this Plate, are taken from an inscription found upon a plate of brass, formerly fixed upon a pillar at Glastonbury, and which is alluded to by the word *lamina*. Our author states that the walls of the church were made, according to William of Malmsbury, of twisted rods, an old method which was sometimes used in building even palaces. Thus, he adds, the king of all Wales, A. D. 940, Hoel Dha, built a house of white rods as a hunting seat, when he came into Demetia; which, from that circumstance,

In addition to these passages, another occurs from William of Malmsbury. It is brought forward with great candour, by Dr. Milner, in his late publication,* at the same time that he professes his hostility † to the theory to which it furnishes no inconsiderable support. It appears by this passage, that St. Paulinus, a bishop and missionary from Rome, in the 7th century, (627,) shewed a peculiar regard and veneration for this old church, (which notwithstanding the long interval elapsed from the time of its foundation, remained in its original state,) and took most effectual means to preserve it. The passage is as follows: ‡

Passage quoted by Dr. Milner.

Anecdote of Paulinus.

was called *Ty guin*, or the white house, the rods having been pealed in honour of the king. Castles too were so formed. Arnulphus de Montgomery, (according to Giraldus Cambrensis,) during the reign of Henry I. of England, built the Castle of Pembroke of turf and wicker.

In completing the design of the Old Church, the same author has represented it as covered with straw or reeds, according to the British custom, for which he quotes Bede; and the passage referred to adds one to the testimonies relative to wicker houses, which is not the less valuable that it occurs here incidentally. "Accenso (inquit Beda) grandi igne in medio (domus) contigit volantibus in altum scintillis culmen domus, quod erat virgis contextum et fœno tectum subitaneis flammis impleri."

Spelman further states, as from his own observation, (nearly 200 years ago) that such wicker houses occurred every where in Ireland, and often also in England. "Virgeas hujusmodi domos passim vidimus in Hibernia sæpe etiam et in Anglia."

* Page 22. † Page 75.

‡ "Paulinum asserit patrum traditio ecclesiam, contextam dudum ut diximus *virgis*, ligno tabulatu induisse et plumbo, a summo usque deorsum cooperuisse. Egit namque prædicabilis viri solertia ut nihil decederit sanctitati, et plurimum accederit ornatui." Gul. Malm. *Antiq. Glaston.* apud *Gale.* Dr. Milner's *Eccl. Hist. of Eng. during the Middle Ages*, p. 127.

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" Tradition asserts, that St. Paulinus encased this church, which, as we have said above, had hitherto consisted of *rods*, with a frame of timber, and covered it from top to bottom with lead. For this worthy man provided that nothing should be lost of its sanctity, and that much should be added to its ornament."

The imitation of these relics in stone may have given birth to Gothic architecture.

These passages prove beyond a doubt, that the first apostles of Christianity in this island did actually perform divine service in oratories made of wicker-work; a mode of construction the most natural for men to have recourse to, in a wooded state of the country, who were devoid of the tools and of the skill required to construct more substantial fabrics. Now it is well known with what veneration any vestige of those persons who introduced Christianity was regarded in after ages; the more so, if it bore evidence of the sufferings and poverty of these holy persons. It is to be expected, then, that a wicker edifice, which was looked upon as the meanest of any, having been thus honoured, should be venerated as a sacred relic; and that the same disposition which led men, as we have just seen, to cover a wicker fabric with lead, should induce them to preserve its peculiar forms by representing them in stone; and this attempt, when

carried into execution, being found to produce a beautiful effect, it is not unreasonable to suppose that the idea should become a favourite one, and being followed out by successive refinements, might give birth to a new style of architecture.

Objection urged from late appearance of Gothic style answered.

The late appearance of the Gothic style has been urged as an objection to these views, upon the ground, that if this mode of construction originated from the woods, or arose out of the practice of the first founders of Christianity, it ought to have made its appearance earlier than any other style in this country, whereas it is known to have been preceded both by the Saxon and by the Norman styles.

In answering this objection, I must admit that some parts of the subject are involved in obscurity which I cannot pretend to penetrate.

Though the earliest works of the Gothic style that are known to us, belong to the middle of the 12th century, there is no direct evidence that this was the period of its first introduction. Buildings of this sort may have been erected at far earlier periods, without having been preserved; or Gothic works may exist at this hour, the antiquity of which is far greater than has been supposed, though no circumstance has

CHAP. V. hitherto occurred fit to ascertain the real date of their construction.*

* Since this work went to press I have seen Mr. Haggitt's two letters, just published, in the second of which he endeavours to vindicate Sir C. Wren's opinion as to the Oriental origin of Gothic architecture. I must own that he has given more weight to this view than I conceived to have belonged to it; particularly by those cases in which he brings forward the pointed arch, as found in company with inscriptions in the Cuphic character, which is understood to have been disused since the tenth century; shewing that these arches had been constructed long before the period of the Crusades.

But how is this to be reconciled, it may be asked, with the origin of the Gothic style traced, in this Essay, from the primitive wattled oratories of Glastonbury and Durham?

In answer, I maintain that these rival origins do not exclude each other; and the facts seem to authorise a belief, that the same course had, in some respects, been followed in both cases; that the original wattled oratories of Joseph of Arimathia had been represented in stone by the early Christians in the East, as well as by those in the West; the peculiar form of the pointed arch, thus invented, having been borrowed at an after period by the Mahometans.

If this really happened, it is natural to expect that the inhabitants of these western countries, who flocked to the Holy Land at the time of the Crusades, finding the same architectural ideas to prevail among the old Eastern Christians which belonged to themselves, and which in Great Britain, they had put into execution in the form of interlacing arches, would enter eagerly into the same views, and adopt whatever advances had been made in the same line. They would, therefore, encourage the Free masons to return with them, as Sir C. Wren has pointed out, and employ them in the erection of churches in all quarters, conformably to these ideas common to all parties, but concealed under the ban of Masonic secrecy.

I should be unwilling to advance a theory in which so much conjecture is involved, if it did not lead very directly to the observation of facts, by which all these difficulties may be cleared away; and I have already contributed, I trust effectually, towards the accomplishment of these observations. Sir C. Wren has represented the Gothic style as having been invented by the Saracens and afterwards refined upon by the Christians. But surely the Gothic works of the good times possess too much consistency to have been produced by successive hands; the founders and the refiners, whether Christians or Saracens, must have been animated by one principle; and if the Gothic style did originate in the East, we may expect to find in the Eastern works those same characters which distinguish it

But the system which has been advanced in this Essay is not the less probable, though a great interval of time should have elapsed between the actual use of willow fabrics, and their imitation in stone. It is not when men have recently escaped from poverty and oppression, that they feel any affection for the memorials of that state; they are then, on the contrary, disposed to take delight in what is new and splendid; nor is it until time has obliterated all anxiety and irritation, that the circumstances connected with past

among us, and which may serve as guides in all future researches. These characters have never yet been properly looked for; nothing having been attended to but the pointed arch, which, though one important feature is, as we have seen, only one among a great number of others, by each of which the style is not less distinctly indicated.

The statement in this Essay will be found, I trust, clearly to point out these various objects, and will enable a traveller, without being an accomplished draftsman, and simply by naming these objects, to communicate his observations to the public. I have looked for them in Mr. Haggitt's plates, and I find something like the clustered column in one, and something like a cusp in another; but engravings ought not to be trusted. Since an artist must often be greatly tempted to improve his effect by some small touch which he may consider as of no consequence, but upon which the merit of the whole may depend.

Much reliance may be had upon drawings done on the spot, by travellers not aware of such questions; but actual observations alone can be trusted, made by persons previously masters of the subject under discussion. I beg leave earnestly to recommend to such observers, when they meet, in the East, with those edifices in which the pointed arch occurs, that they will also search for the *groinings* of the *roof*, the *tracery* of the *windows*, the *clustered columns*, the *mouldings*, the *cusps*, the *crockets*, the *steeples*, the *pinnacles;* in short, for that multitude of peculiar forms which have all conspired, as shewn in this Essay, in demonstrating the imitation of wicker-work in stone; which method, wherever it first arose, seems unquestionably to have guided the execution of the architects in this quarter of the globe during the 13th, 14th, and 15th centuries.

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Veneration derived from the antiquity of these churches.

sufferings begin to interest the feelings, and acquire a character of veneration. Then every object which recals that primitive state, and every memorial of what was then suffered, is traced out and regarded with the utmost enthusiasm.

The anecdote of Paulinus shews the veneration which was paid to these fabrics in the 7th century; an intermediate period between the first undoubted appearance of Gothic work in stone, and the legendary date of the supposed prototype.

It is remarkable, that the complete establishment of the Gothic style took place at the period of the Crusades; when an enthusiastic veneration for relics pervaded Europe. The wicker fabrics of the primitive Christians would at no period be so likely to become an object of imitation to the artist, as then; when time had obliterated all impressions but of the sanctity of those who constructed them. Under the influence of such feelings, it is not wonderful that the idea should occur of so far modifying the stone-work of the Saxon style, as to recal the memory of those primitive churches,* without causing any very great

* The willow fabric, a drawing of which I have given in the frontispiece, was not intended to represent a primitive place of worship, but rather a bower, such as the Free-

alteration in the general forms already established; thus the Gothic style may have been first introduced as at Kelso,* through the intermediate form of interlacing arches. CHAP. V.

masons might be supposed to construct as an exercise of taste and invention, or as a model of any new and ornamental device which it was intended to submit to the approbation of the brotherhood.

It is not likely that the early Christians would bestow much pains on decoraring their places of retreat; but when, in after ages, the primitive *church* of *wattles* was assumed as the prototype of a cathedral, we cannot doubt that the architect would feel justified in adopting every elegance of which he found wicker-work susceptible.

* In Dr. Milner's work, (Eccl. Hist. p. 84.) the following passage occurs. "If we may "give implicit credit to the drawings and authorities of Grose, the Scotch were not long "in adopting the new style of the English, which was probably introduced among them "by David their king, who came into England to command the army of his niece, the "Empress Maud, against King Stephen. Thus much is certain, that Kelso Abbey, "founded by him before he came into this country, namely in 1128, affords no specimen "of the pointed arch, whilst other abbeys and churches in Scotland, built soon after his "return home, present much the same mixture of round and pointed arches, as occurs in "all the sacred edifices of that period in England."

But Kelso Abbey does exhibit as perfect an example of interlacing arches, as any of those at Winchester, shewn in Dr. Milner's book; though I find that they are omitted in Mr. Grose's view, or rather rendered invisible by the smallness of the scale. I have, however, frequently examined and drawn them with care, and I can answer for the fidelity of their representation by Mr. Blore, in Plate LV. of this work. The date of Kelso is 1128, whilst none of the similar works at Winchester, or any where in England, is reckoned earlier than 1132. David's expedition to England did not take place till after the death of Henry the First in 1135, though it is true that he had been there during the lifetime of that prince. These facts are far from favouring Dr. Milner's conclusion, that David had brought the pointed arch back with him from England; since, of the two nations, it seems to have appeared earliest in Scotland. Were this point to be eagerly contested much light would soon be thrown on the subject; already the consideration bestowed upon it leads to this curious inference, which I shall beg leave to express conformably to the views advanced in this Essay; That the desire of doing homage to the primitive wicker oratories, by representing their forms in stone, was felt and acted upon nearly about the same time, in parts of this island very remote from each other.

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NAME OF GOTHIC ARCHITECTURE.

One consequence of the mysterious state of the history of this style, and which contributes much to perpetuate that embarrassment, is the want of any rational name by which it may be distinguished. In the times when the art prevailed, it seems to have had no peculiar name, at least on this side of the Alps, but exclusively to have possessed that of architecture. When it fell into disrepute, a name became necessary to distinguish it from the style which began to prevail. The term employed for that purpose seems to have been borrowed from a mere expression of obloquy, as at this day we call a thing Gothic, which we mean to reprobate as barbarous. It is thus that Vasari says it was invented by the Goths, by which I conceive he means no more than to express his hatred, by ascribing it to a set of barbarians, for, in the outset of that passage, he calls it German, (*lavori chi si chiamano Tedeschi.*) Perhaps this very expression may have given rise to the name of Gothic, since Vasari's book was in the hands of all the artists. I am convinced, that it has not arisen from any real connexion with the Gothic nation; and, in confirmation of this idea,

The name of Gothic used as an expression of obloquy.

I have learned from Mr. Byres, that, chiefly with that view he spent ten days at Ravenna, the principal seat of the Goths in Italy, without having been able to discover one example of this style. CHAP. V.

Various authors being convinced of the impropriety of this name, have endeavoured to distinguish the style in different ways, each according to the particular hypothesis which he entertained respecting its history. Sir Christopher Wren (as expressed in the passage quoted above, in page 107,) has led the way in calling it Saracenical, and has been followed, as we have also seen, (page 98,) by Mr. Grose, and I believe by several others. But, for reasons which I have stated above, I am satisfied that this name would only tend to mislead. Others have proposed to call it modern Norman Gothic, which I look upon as equally faulty; for the art not having come into England till a century after the Norman conquest, there is no reason for fixing it upon the Normans; the less so, that their coming was accompanied, as we have already pointed out, by the introduction of a new mode of construction quite different from the Gothic style.

In the present unsettled state of public opinion, both with respect to the origin and the history of this

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style, I have judged best to attempt no innovation in this matter, and have made use of the name of *Gothic architecture*; which though certainly no less objectionable than many of those that have been offered to the public, has the advantage of being universally known and understood among us.

The style does not belong to barbarous times.

Gothic architecture has met with great injustice, from an opinion that it was the production of barbarous times; but this is certainly a mistake, for, notwithstanding the wretched state of architecture in Italy, during the ages in which the Gothic prevailed among us, the sister arts of painting and sculpture were, in the same period, carried to a high degree of perfection by a succession of artists from Cimabue, who was born in 1240, to Raphael who died in 1537.* Now Cardinal Wolsey, whose works were all Gothic, was

* From the earliest of these periods, until the regular mode of copying the ancients, and adhering to their orders and proportions, was introduced, early in the 15th century, by Brunelleschi, all the architects, according to Vasari, followed what he calls the "*Maniera Tedesca*," which seems to have partaken, to a certain degree, of what we call Gothic, though it differed from it, in many respects, very widely, as we may judge by the account which the same Vasari gives of the practice of those early masters. "Perchè nelle colonne non osservarono quella misura e proporzione che richiedeva l'arte; nè distinsero ordine, che fusse più Dorico, che Corinto, o Ionico, o Toscano; ma alla mescolata con una loro regola senza regola: facendole grosse grosse, o sotille sotille, come tornava lor meglio. E le invenzione furono tutte parte di lor cervello, parte del resto delle anticaglie vedute da loro."

not disgraced till 1529; so that it appears beyond a doubt, that the Gothic prevailed exclusively in England during the lifetime of Raphael; a period at which the fine arts attained to higher perfection than they have ever reached since.

Nor were these arts confined to Italy; for we find upon the Gothic edifices constructed in the latter times, numberless statues of kings and saints executed in an excellent style of sculpture. Upon Waltham cross are several female figures of the greatest beauty, strongly marked with that air of truth and simplicity, which is the characteristic of the early Florentine school, and of the first manner of Raphael.

CHAPTER VI.

Comparison between the Greek and the Gothic styles. Each of them founded on a peculiar system of Imitation. Contrasted in many respects. This contrast peculiarly marked in the sacred edifices. Consequences produced by that contrast. Difficulty of applying the Grecian style, to modern purposes; Question if the Gothic would not be more applicable. Importance of returning to the principle of Imitation. Single example of its employment in modern times. Advice to the young artist.

CHAP. VI.

In opening the subject of this Essay, I pointed out the great injustice of contrasting the architecture of the ancients with the spurious Gothic of Italy. But I maintained, that a fair comparison between the Greek and Gothic styles would lead to an opposite conclusion; and I ventured to promise, that in the course of this Essay I should be able to show, that, under forms entirely different, the same spirit pervades both. I trust, that much has been already done towards the fulfilment of that promise, in its first and most essential point. In the foregoing pages, proofs have been brought forward in various shapes, which evince, in a manner, I conceive, very little short of absolute

Comparison between the Grecian and the Gothic styles.

demonstration, that the Gothic architects, had perpetually in view, in the course of their execution, the imitation of a rustic prototype; which, notwithstanding various modifications, arising out of the circumstances of the case, can be recognized in every part of their works. CHAP. VI.

In this essential circumstance, then, the two styles are exactly on a par; and under forms entirely different, the same spirit pervades them both; since both are thus invested with a character, and a set of proportions peculiar to itself. This view furnishes a complete answer to the common objection made to the Gothic style of wanting *proportions*, for that accusation has always been the consequence of judging the Gothic by Grecian rules, in which case it could not fail to appear absurd and disproportioned, whereas when tried by its own laws it will be found completely consistent, and harmonious in all its parts. Each has its prototype.

The rustic original of Grecian architecture, when in its simplest state, could suggest few ideas to an architect either of beauty or variety; for being made of square beams of timber supported by round posts, or stems of trees, its form would be heavy and abrupt, and at the same time dully uniform. But in the Grecian original very rude.

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course of practice carried on during a long succession of ages, a number of ornamental finishings and elegant appendages have been introduced, first by the carpenters and afterwards by the architects, which have raised the style to the highest pitch of excellence among the fine arts.

Gothic original most elegant.

On the other hand, the Gothic original being possessed, even in its rudest state, of a considerable share of elegance, and lightness, and being susceptible of high decorations by a well judged choice of its own forms, would furnish abundant variety; so that the artist would never be tempted, either when working in wicker or stone, to introduce any extraneous forms, but would be able to accomplish every purpose, either of use or ornament, with the assistance of wicker-work alone.

Thus the Gothic style is in all its parts nearly connected with nature, and has borrowed its forms from that genuine source of beauty; whereas the Grecian is more indebted to art, but to art guided by taste so sublime and so pure, that, by a happy selection and combination of the scattered graces of nature, it has produced works superior in beauty to any individual natural object.

Small ornaments.

The judicious employment of small ornaments has greatly assisted the artists in both styles, in producing distinctness, by characterizing particular parts in a manner that is perceived at the first glance. This has been accomplished in a different manner in the two styles, though with equal success in both.

The Grecian ornaments, some connected with the original structure, some appended to it, are originally both numerous and varied. Those of the Gothic style when reduced to their simplest state, only amount to two, the bud and the cusp; but we have seen them when combined with that multitude of forms of which wands and hoops are susceptible, and reduced to architectural symmetry by means of the mouldings, exhibit a degree of variety, not inferior to what we meet with in the works of the Greeks.

The Grecian ornaments are local, that is to say, each of them is inseparably connected with some main part of the structure so as always to denote it. Thus the volute always occurs upon the capital, and the triglyph upon the freeze. This circumstance gives great distinctness to the whole, by enabling a spectator accustomed to such works, at first glance to observe and distinguish every part.

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The Gothic ornaments, on the contrary, are of universal application; they may be placed any where, or occasionally omitted, according to the taste of the artist; and this liberty when properly used, has given rise to a means of producing distinctness, no less effectual than that derived from the locality of the Grecian ornaments. For by employing or leaving out a particular ornament, the artist could characterise any set of forms throughout the whole work, so as to distinguish it in a particular manner from all the rest. Thus in the spire of Newark, the rods of the windows are budded, and those of the spire are left plain; which enables the spectators at a glance to distinguish the two classes.

These devices were greatly favourable likewise to the boldness of the Gothic designs; for by means of them the artist was enabled to assimilate to the rest of his work, many forms which would otherwise have been quite incongruous to it, and thus to give to the whole an appearance of truth and consistency; as we have seen in the case of the buttress.

Original Grecian forms retained.

The Greeks of the purest times having scrupulously maintained in all their temples, the original form peculiar to the first rude structure of timber, which by

the nature of its construction, could admit of little or no variety, nearly the same general plan, and distribution of parts is to be met with, in all of them; whilst the varieties of the art, and those in particular which characterize the five orders, reside entirely in the details of execution; in the form and proportion of the columns, and in the selection and execution of the ornaments. Thus Grecian architecture, though rich in ornamental details, was susceptible of little variety in the general plan. It has therefore failed when applied to our purposes, though in the hands of the old Greek masters, and employed in the construction of works suited to the wants of that people, it has far surpassed any other style. CHAP. VI.

Gothic more varied.

Gothic architecture, on the other hand, with great variety in ornamental details, admitting of the greatest latitude in the general plan and distribution of the parts; and being susceptible of almost any shape, is applicable to every purpose, and might be suited to the manners of every nation.

Contrast of sacred edifices.

The principal difference between what we require, and what suited the wants of the Greeks, lies in the sacred edifices. Among the ancients a temple was looked upon as the habitation of the God; few people

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entered it, and that upon the most solemn occasions only; while the worshippers remained in the open air. With us a church is intended to accommodate the whole congregation, and therefore requires much room within, and a great deal of light, whereas a temple had little need of either; accordingly we find, by the remains of antiquity, that the inside or *cell* of the most magnificent temples, was dark, that is to say, receiving no light but by the door, and was so small as scarcely to be fit to accommodate one of our country parishes.

In order therefore to apply Grecian architecture to our purposes, it has been found necessary very much to alter the old Greek plan; but this having little variety, could not easily admit of any change. And a Grecian colonnade being in itself a most perfect form, we cannot well conceive how any thing should be taken from it, or added to it without injury; at least to do so would require a hand no less dextrous than that by which it was originally designed. It is not, therefore, wonderful that our artists, employing Grecian architecture for new purposes, and introducing without ceremony forms unknown to the Greeks, should produce works devoid of those beauties for which theirs are so highly distinguished.

Greek style applied with difficulty to the construction of churches.

Introduction of windows has occasioned much detriment to the effect.

The greatest detriment seems to have been occasioned by the introduction of windows, for which the old Greek masters had made no regular provision, but which are indispensible in most of our buildings. For by thus obtruding a new form upon the old style, its unity of design must be violated. The more so, that a set of windows partake, by their form and arrangement, of the regularity of a colonnade, and consequently occasion more disturbance of the general effect, than if there had been no resemblance between them. It is thus that, in a concert, we can listen to a piece of music with some degree of patience, notwithstanding the noise of coaches in the street, or the flapping of doors; but were a person present to take up an instrument and begin to play any tune at random, the interruption would be altogether intolerable. No less impertinent is the introduction of a regular set of windows into the intercolumniations of a front. It is probably owing to this, that many temples and other monuments of antiquity, maintain, in a great measure their air of grandeur and purity, although their intercolumniations are filled up by mean and irregular houses; while numberless modern palaces, executed in imitation of them, and formed of great colonnades

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with regular windows in the intercolumniations, produce the most paltry effect.

In most modern buildings of great size, the windows have occasioned a fault of a different kind, by violating their unity of plan, as in the senate-house of Cambridge, one of the simplest of modern works, consisting of a handsome Greek colonnade, which indicates, as is indeed the fact, one colossal room within; but where the indication of the columns is contradicted by two rows of windows, one above the other, the habitual mark of two stories.

The necessity among the moderns of forming edifices spacious within, has been a source of great confusion; for the old Greek masters not having need of room, have left us no good examples of the kind; and our own artists in pursuit of that object, have piled order upon order, and have joined together various parts in the same building, which, though each be beautiful in itself, have no connection together, and can only deserve the name of more or less elegant pieces of patch-work.

Moderns have followed the Greeks in a partial manner.

Although the moderns have taken the architecture of the Greeks for their model, they have followed it in a confined and partial manner, their whole attention

being engrossed by its ornaments and proportions; with a view to acquire which, they have studied and measured the remains of antiquity with infinite pains, a work doubtless of great importance in itself; but they have quite overlooked the advantages to be derived from those rules and principles, by which the ancients themselves were guided, in connecting under one system of imitation the various parts of the same edifice. CHAP. VI.

This neglect began among the Romans, who in their latter works, seem quite to have lost sight of this principle. Be that as it may, it is certain, that in the reign of Domitian, that is about a century after the Augustan age, the broken entablature made its appearance in the temple of Pallas, and in the triumphal arches of that time, and the admission of this barbarous novelty, incompatible with the Grecian original proves, that the principle of imitation had then ceased to be adhered to. From that time forward, greater and greater innovations crept into the practice of the architects, till the arts were lost in total barbarism. In the course of the 16th century, when architects began to look for models among the ancients, Sir C. Wren says, " that, like the grammarians, they studied the

This neglect began among the Romans.

CHAP. VI. productions of the Augustan age and that century." But in my opinion, this has by no means been the practice of the architects, who, satisfied with the mere name of antiquity, have never looked high enough for their models, but have condescended to copy into their works the barbarous innovations of lower times. Of this we meet with numberless examples in the modern edifices of Rome, in which the broken entablature prevails very generally, and in which most of the ancient rules of composition are set at defiance. In order to illustrate this, we may compare together the front of St. Peter's at Rome, a work of the greatest fame among the moderns, with the *Maison Quarrée* of Nimes, a Corinthian temple of the Augustan age. In the front of St. Peter's no two pair of columns stand upon the same line of front, nor at equal intervals asunder; the entablature partakes of the confusion of the columns, and is broken in a number of projecting and entering parts; the columns are divided in the middle of their height by a solid gallery of stone; and the whole is frittered by the introduction of several rows of windows, and crowned with an attic story.

The broken entablature.

In the *Maison Quarrée* the entablature is unbroken;

the columns stand at equal intervals and in the same line of front; and the ornaments of the capitals and of the entablature are so well adjusted to each other, that they contribute greatly towards the distinctness, as well as elegance of the whole. In St. Peter's these same ornaments occur, and are executed in the same proportions; but they only serve to mark the inconsistency, and to point out in every part the violation of those rules which the old Greek masters considered as sacred. CHAP. VI.

In the works of Boromini and others at Rome, the violation of the ancient rules of composition is carried to a still greater excess, and the ancient forms are intermixed with so many fantastical figures, and interrupted in so extravagant a manner, that to judge of such buildings by the principles of the Greeks, they would seem to have been the production of a frantic imagination.

But a modern architect may say, "What have we to do with the rules of ancient Greece? If we produce fine buildings, our rules are as good as theirs. Give them their temples, leave our churches to us, and let us all live in peace." This would be unanswerable, were it true either that the modern architecture were

CHAP. VI. founded on independent inventions, brought forward for the first time by the moderns, or that the ancient Greeks had worked upon no connected system: for in either case, chance or mere taste might favour us as well as them. But in adopting into his practice the forms, ornaments, and proportions of the old Greeks, the modern architect has irrevocably signed and sealed his submission to their laws; and he will struggle in vain to shake off the yoke. For every thing in a Grecian work making part of one consistent whole, when any part occurs it naturally suggests to the spectator's imagination, some idea of the whole edifice; as we form some notion of what a statue has been, by finding one of its limbs Were a building to be produced, by combining the forms belonging to different ancient works, the result would be an assemblage no less ridiculous, than a human figure formed by putting together the scattered limbs of many different statues.

Mixture of styles.

Where no regular system is followed, by which the various parts of an edifice may be connected together, and where nothing is attended to, but ornaments and proportions separately considered, such blunders cannot easily be avoided; we see, accordingly, but too

many examples of the kind in modern works. Nay, the extreme case just stated, has actually been realized in all those buildings, in which the Gothic is blended with other styles of architecture. This we have already pointed out in many cathedrals built during the first introduction of the Gothic art; and the same fatality has attended its downfall: As the buildings executed during a certain period after the Gothic fell into disrepute, exhibit a motley jumble of Greek and Gothic ideas. We see an example of this kind in a work said to have been designed by Inigo Jones, in which we have a Gothic window placed between Ionic pilasters, each of which is crowned with a pinnacle.*

Perpetual struggle between the ancient principles and the modern distinctions of the art.

From such monsters, a person accustomed to see the pure works of antiquity turns with disgust; but their absurdity is such as to strike even those who have paid but a very slight attention to the subject, and who have happened to see some engravings of ancient temples. For we often carry on long and deep trains of reflection, particularly in judging of the fine arts, without being conscious of reasoning at all; thus a person who views a picture, may be pleased

* Tron Church of Edinburgh.

CHAP. VI. with the effect produced by the observance of the rules of perspective, or shocked at their violation, though he be ignorant of those rules, or perhaps never heard of any such.

The practice of modern architects thus exhibits a constant and inveterate struggle between the principles of ancient Greece, and the present destination of the art; and we often see the most elegant taste perish in the contest; for in the midst of all the absurdities that have been exposed, *parts* very frequently occur, which sufficiently prove the skill of the artist; and which shew, that if his genius had not been crushed by the incompatible exertions which his situation required, he might have produced works, fit to rival the best performances of antiquity.

To reconcile the forms of Grecian architecture to our purposes, is certainly no easy task; it would be rash, however, to pronounce it impracticable, as no attempt of the kind seems to have been made in the only way likely to succeed, namely, by recurring to the origin of the style, and by attending to those first principles which the old Greek masters considered as indispensable.

It is worthy of consideration, on the other hand,

Question, if the Gothic might not be resumed with advantage.

whether the Gothic style has not been rashly thrown aside in modern times, and whether great advantages might not be derived from its revival, in the construction of our churches and other public buildings. We stand, with respect to Gothic buildings, on the same footing as the Romans did to those of the Greeks. For the religion of the Greeks and Romans being the same, and their manners not very different, the same buildings would answer the purposes of both nations; and thus the edifices of the Greeks served as complete models for those of the Romans. With us, in like manner, a number of beautiful Gothic edifices are still entire, and still continue to answer the end for which they were built.

A Gothic edifice receives and accommodates an immense multitude of people, and furnishes an unbounded supply of light, in a manner which constitutes one of its principal ornaments. And this advantage seems to belong to the Gothic exclusively; for it does not appear, that in any other style of architecture, a provision has been made for the admission of light in an ornamental manner. It possesses, in the highest degree, several different and seemingly incompatible qualities. When entire in all its parts, every where

CHAP. VI. clean and fresh, and enlightened by a bright sunshine, we admire its airy lightness, and lively elegance; but when clothed in a majestic veil of obscurity, or reduced to ruins and overgrown with moss and ivy, we are struck with awe by its solemn grandeur.

In order to do justice to a building of the Grecian style, it is necessary to look at it from a moderate distance; so far off, that the whole may be taken in at one view, and so near, as to allow all the parts to be distinctly seen. Such a view is the most trying for the Gothic, as in that manner the buttresses, which the Gothic architects have in vain endeavoured altogether to disguise, appear heavy and awkward. The fault too with which Sir C. Wren reproaches the Freemasons of overloading their abutments, in this view occasions a detriment to the general effect of the edifice; for the side aisles being made large, and their windows approaching to an equality with those of the nave, the height of the building is to the view divided into two, and its unity of plan destroyed.

The beauty and variety of the Grecian style, which reside in the details of execution, are lost in the distant view; and the edifice then exhibits the dull and abrupt appearance of its timber original, in its rude

and unornamented state. This I found to be true with respect to the magnificent ruins of Agrigentum in Sicily; which I first saw from a distance of two miles; where they looked like large barns; though upon a nearer inspection, they struck me as decidedly superior to all other works of architecture.

A distant view is most favourable to the Gothic style; for its form being boldly varied and strongly characterized in the general plan, produces its full effect, as far as the eye can reach. The fault above mentioned is not observable at a distance, the whole being united in one grand effect; and the spire, a very principal ornament of the style, thus presents its best appearance, as it rises from every village, and diversifies the uniformity of a fertile plain.

It results from this comparison, that the Grecian style excels in all those qualities of *elegance* and *grace*, which depend upon the nice adjustment and masterly execution of details. Whereas the Gothic style, which, with great truth, has been compared to the genius of Shakespeare, is lively, picturesque, and sublime, qualities which are derived from the bold variety, and often from the wild irregularity of its forms.

The Gothic has been well compared to the genius of Shakespeare

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Since then we have found, that Gothic architecture, as an object of taste, is not disgraced by a comparison with the first works of antiquity; and since, in point of application to our manners, it greatly surpasses the Grecian; we have very strong inducements, in the construction of our churches, and other public buildings, to revive * it in its purity; and thus to raise from its ashes that beautiful and much injured style.

Restoration of the principle of imitation is most desirable.

But without confining ourselves to Gothic architecture; were the principle of imitation, which, in old times, has produced such happy effects, again to be resumed among us, we might take advantage of every style according as it suited our purpose, and adapt it to our use without destroying its effect. Or, like Callimachus of old, we might avail ourselves of any accidental occurrence, by which a good effect was produced, and which might be transferred to our works in stone.

* It may be said that this is already done; that the Gothic style is already revived among us, and that vast sums have been already expended in our days in the construction of Gothic works. I admit, that great sums have been spent upon what has been called Gothic work; but I have not met with any such that seemed worthy of being classed with our old buildings bearing that name. And the *principal expense* has been bestowed on a species of work, which, to my feelings, is more disgusting than I can find terms to express: I mean the operation of chipping, by which when part of an old building has yielded to time, the whole is destroyed. And a white new face of the nineteenth century, is substituted for the venerable countenance of the fourteenth.

I have met with but one example of this practice since the downfall of the Gothic style. I mean the Eddystone Light-house, built by the late Mr. Smeaton, in imitation, as he informs us, of the stem of an oak, which, as it rises from the ground, diminishes rapidly at first and then slowly. Were architects to reason and act in this manner, the art being restored to its ancient dignity in theory, might resume its ancient splendour in practice.

One only example of this.

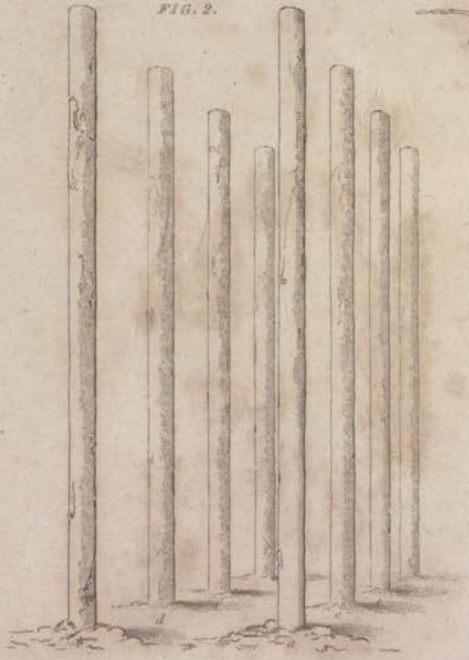
A noble career is thus opened to the ambition of a young artist, whose mind is yet untainted by the vices of any school. After studying the works of genius produced in various ages, and forming his hand to practice by the example of the best masters, let him, in each of his compositions, steadily adhere to one object of *imitation*, which may regulate all his ornamental inventions; and let him anxiously reject whatever is inconsistent with that original. His works will, by this means, be impressed with a character of truth and consistency, unknown in the productions of our times. And whether boldly venturing on original conceptions, he introduces into architecture forms hitherto unknown; or following some old system of execution, he endeavours to rival in their own arts the

Advice to the young artist.

CHAP. VI. Greeks or the Free-masons; his works being founded on nature and reason, will, like theirs, excite the admiration of successive ages, and his fame will stand like a rock amidst the waves of fashion.

London: Printed by W. Bulmer and Co.
Cleveland-row, St. James's.

FIG. 2.



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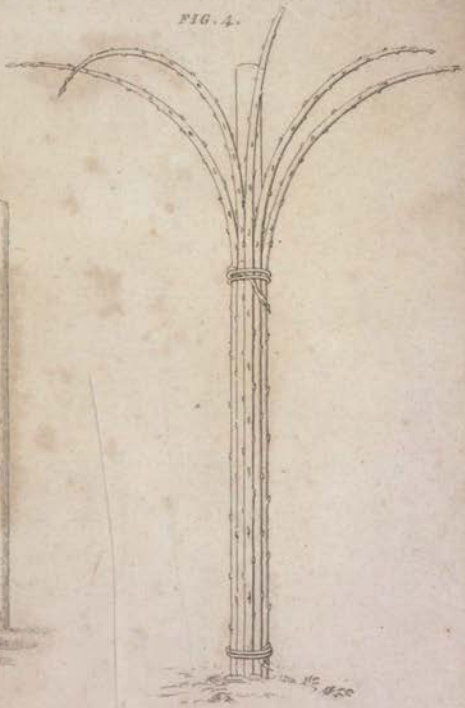

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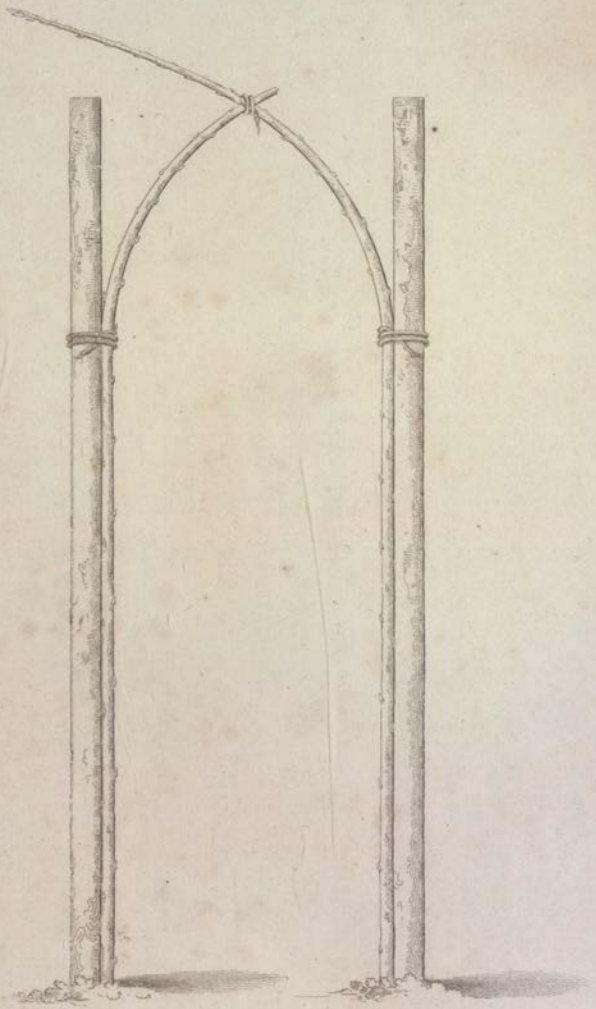

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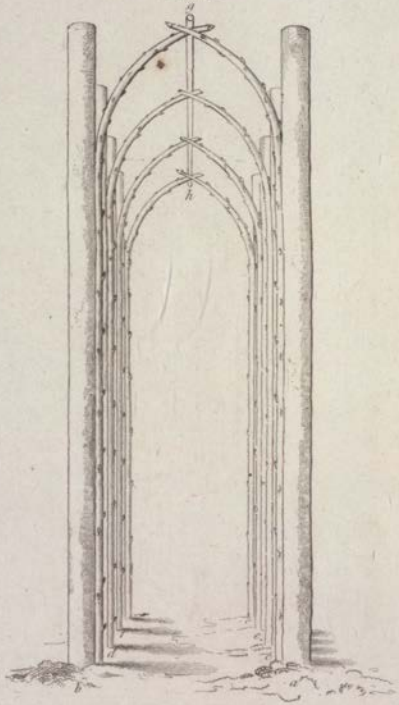

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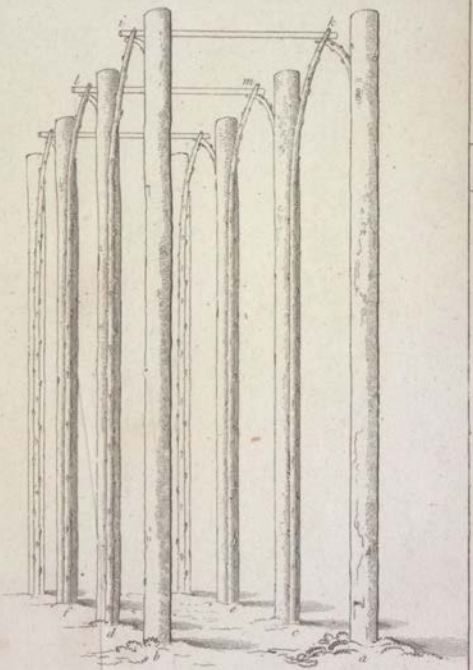

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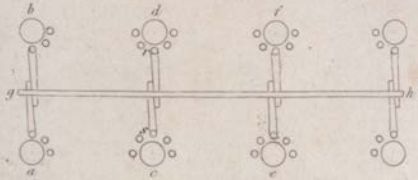

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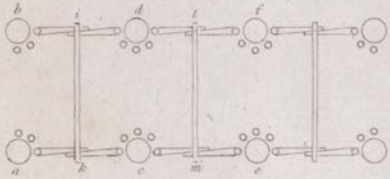

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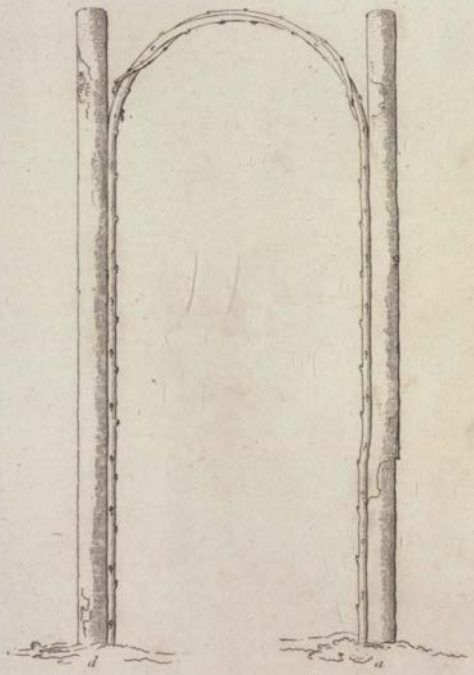

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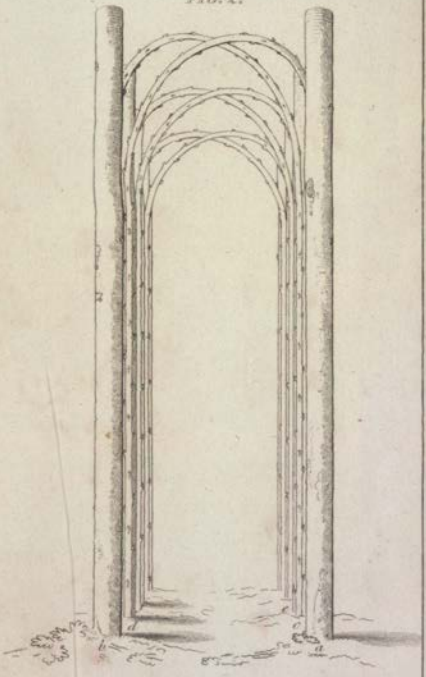

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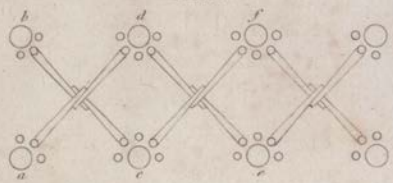

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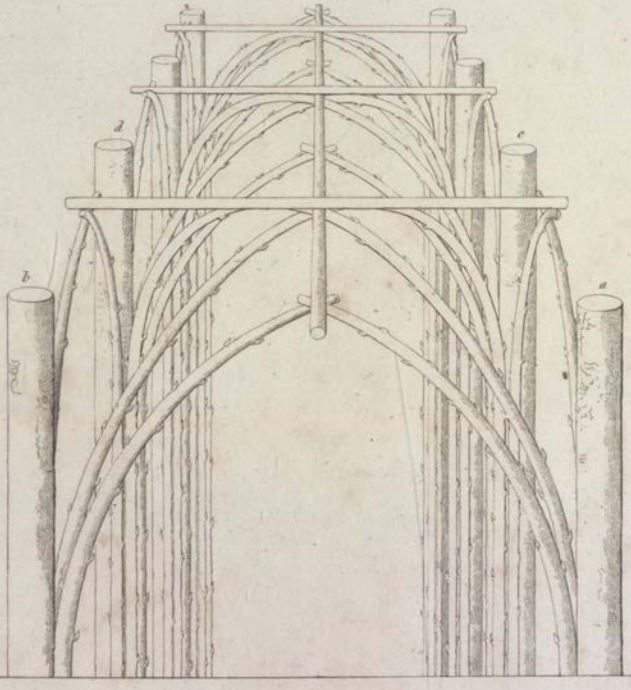

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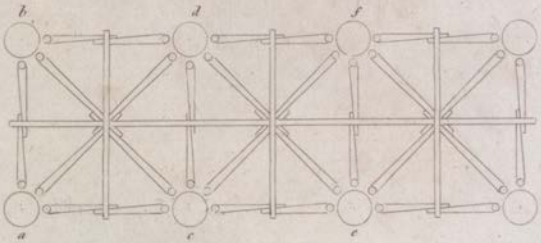


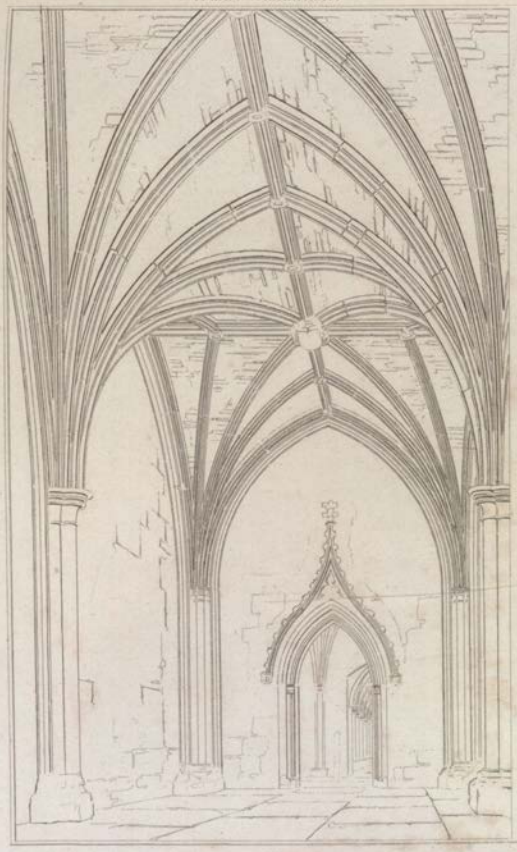


FIG. 1.

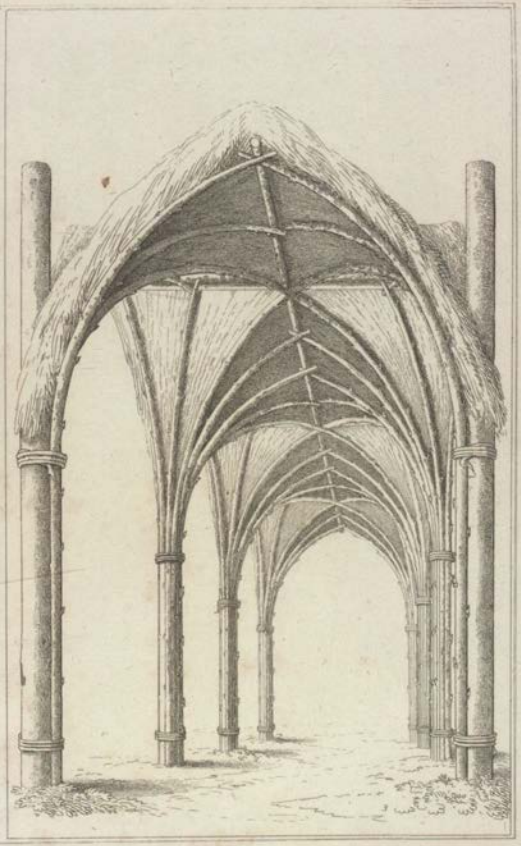


FIG. 2.

FIG. 1.

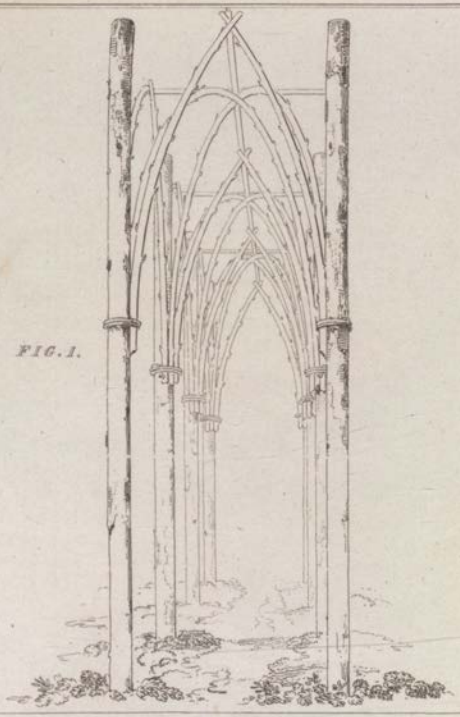


FIG. 2.

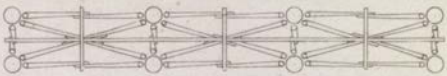


FIG. 1.

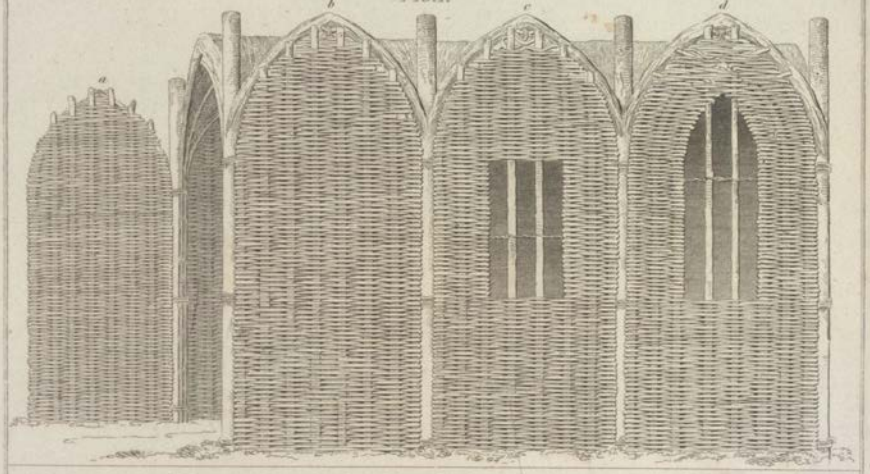
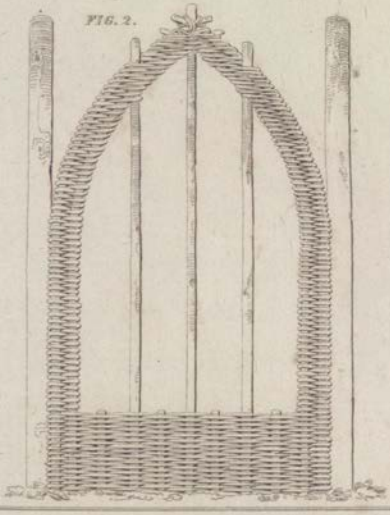


FIG. 2.



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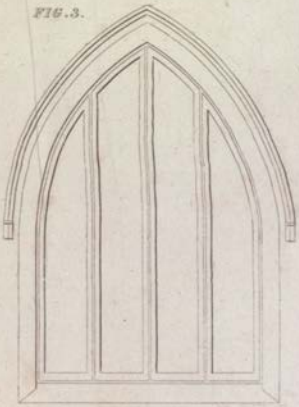


Knaresborough

FIG. 1.

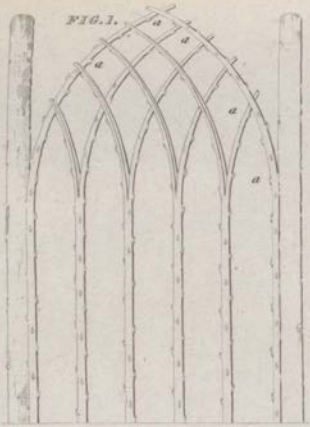
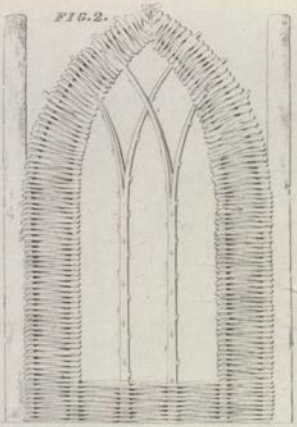


FIG. 2.



Beverley

FIG. 3.

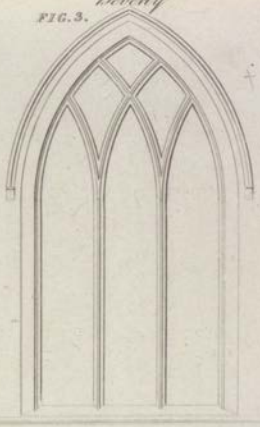


FIG. 4.

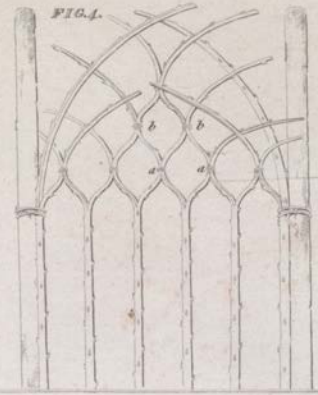
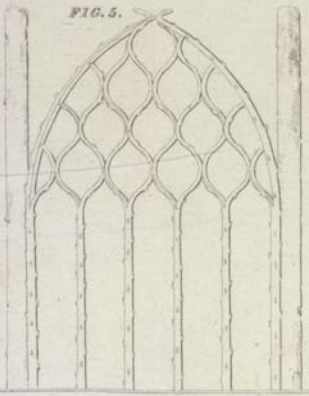


FIG. 5.



Selby

FIG. 6.

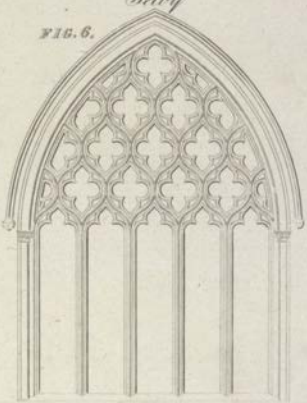
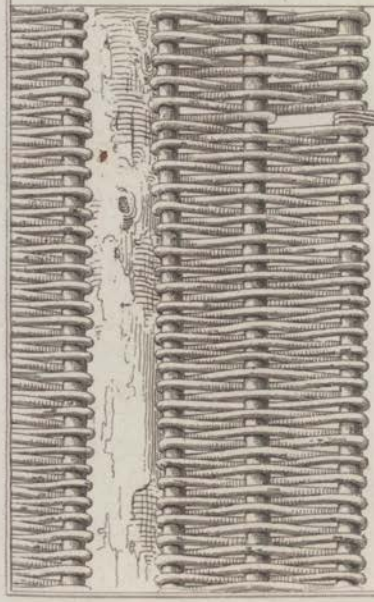


FIG. 1.
FIG. 3.
FIG. 2.



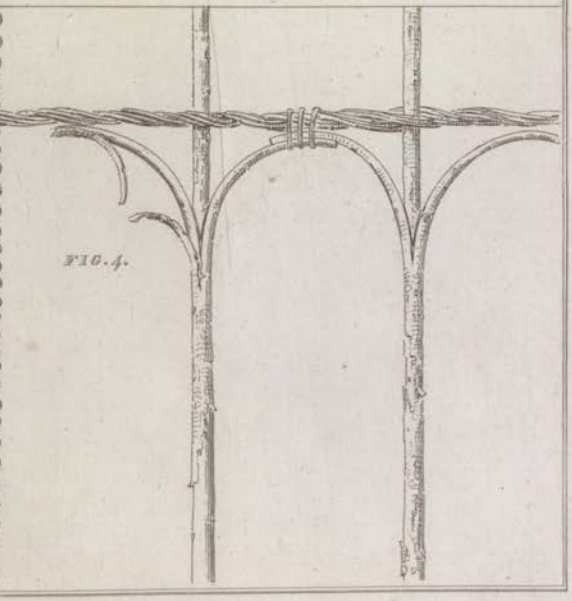


FIG. 4.

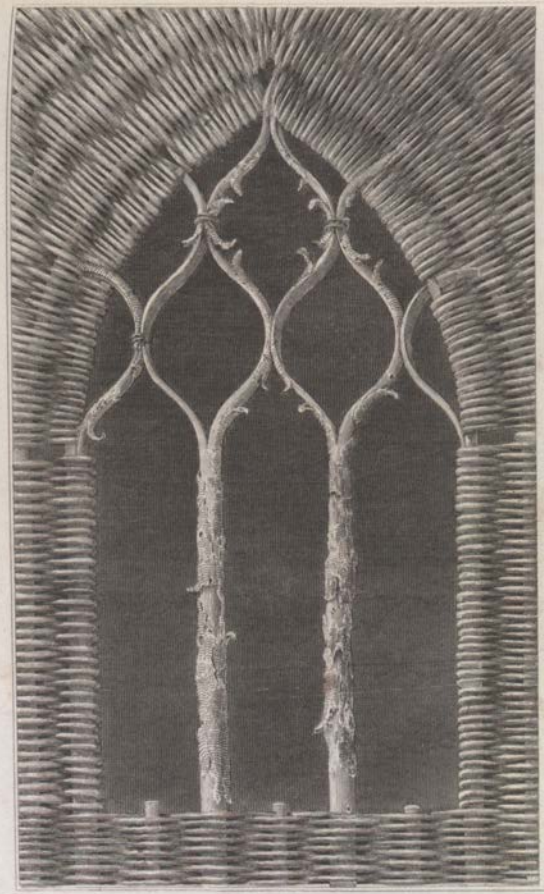


FIG. 1.

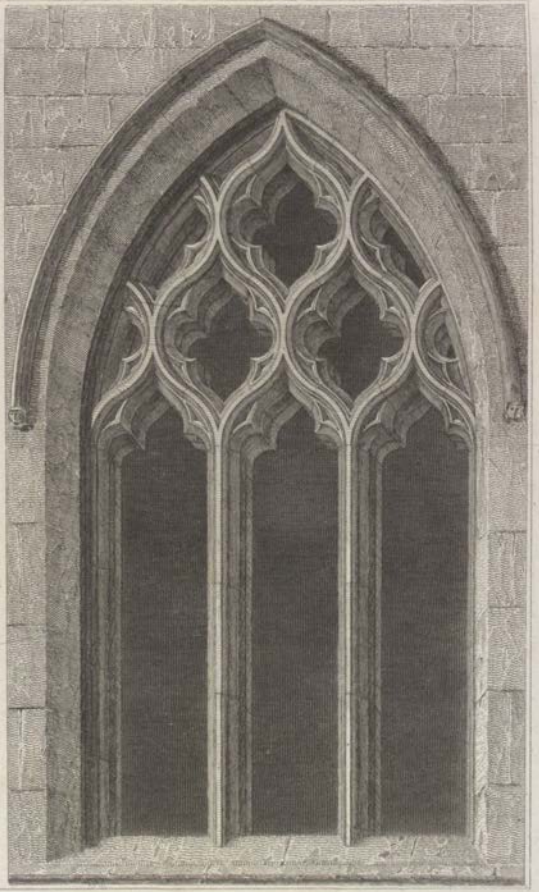


FIG. 2.

Edinburgh

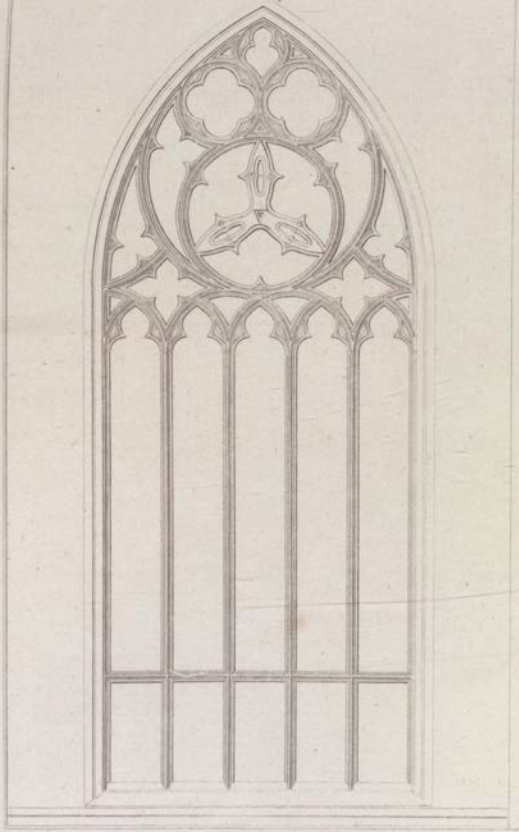


FIG. 2.

Oxford

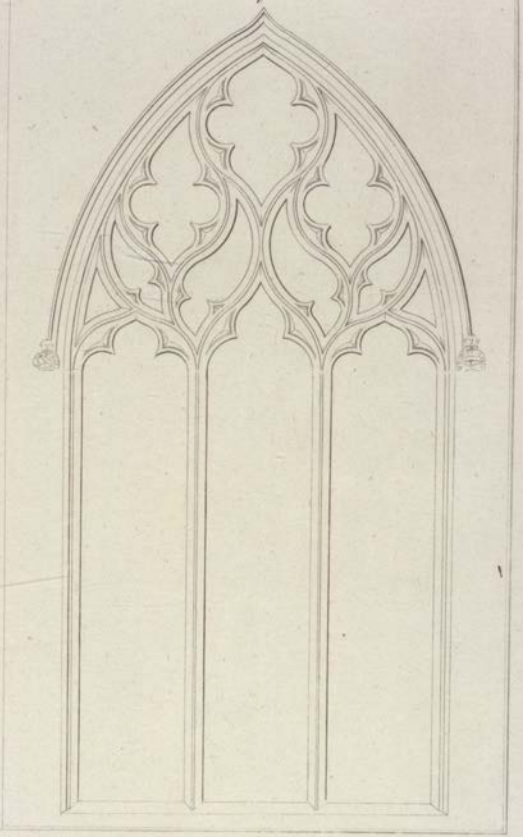


FIG. 1.

FIG. 1.

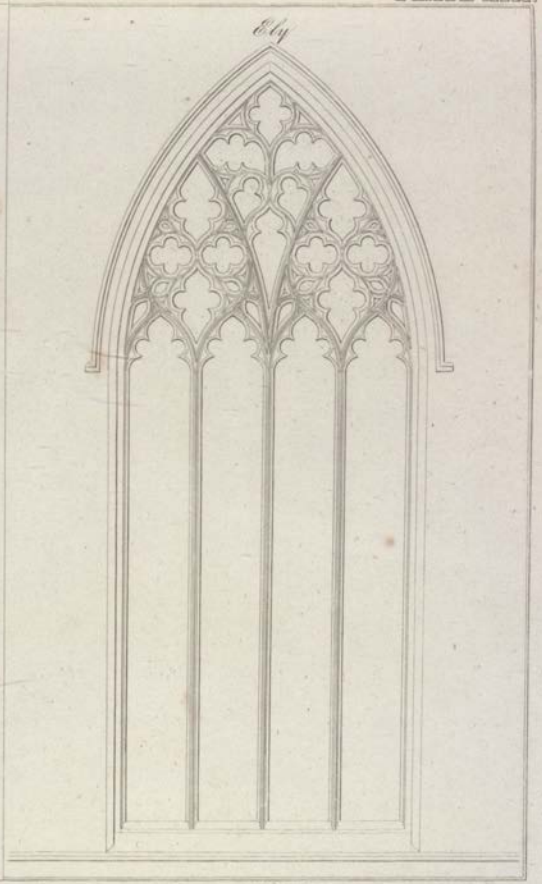
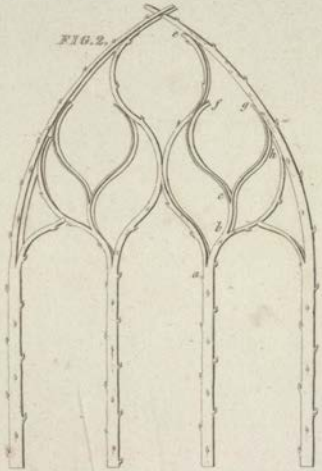


FIG. 2.

Oxford

FIG. 1.

FIG. 2.



Edinburgh

FIG. 3.

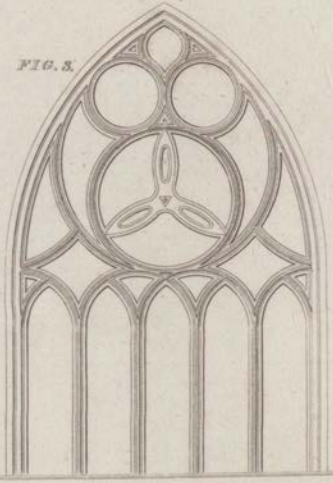
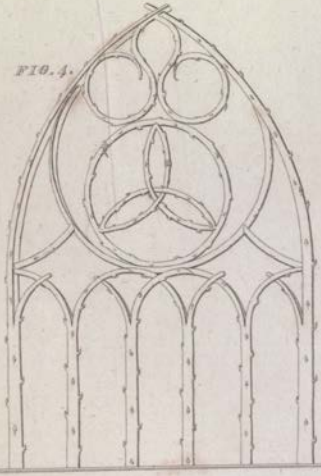


FIG. 4.



Beverley

FIG. 1.

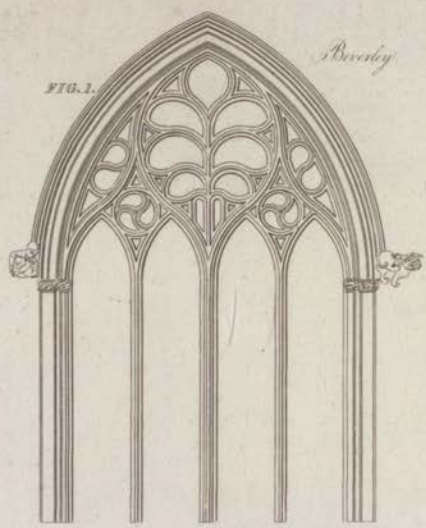
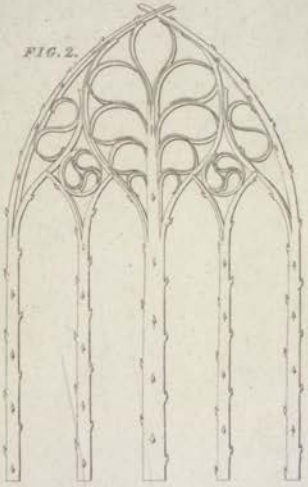


FIG. 2.



Ely

FIG. 3.

FIG. 4.

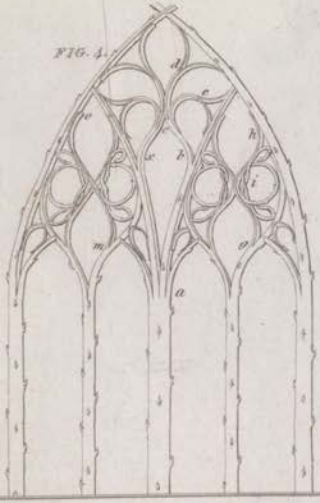


FIG. 1.

FIG. 2.

FIG. 3.

FIG. 5.

FIG. 4.

FIG. 7.

FIG. 6.

FIG. 9.

FIG. 8.

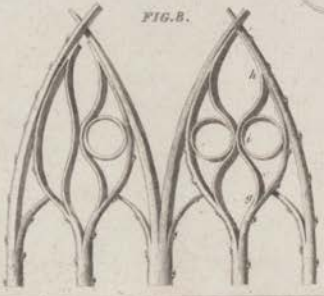
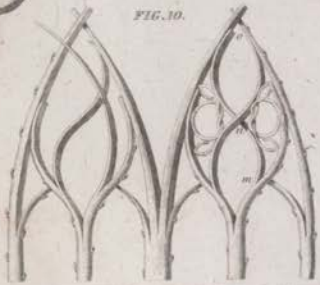


FIG. 10.



Chartham

FIG. 1.

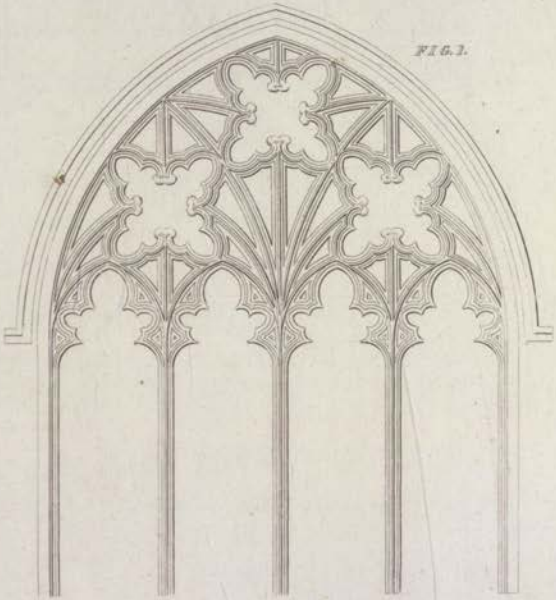


FIG. 2.

FIG. 3.

FIG. 4.

FIG. 5.

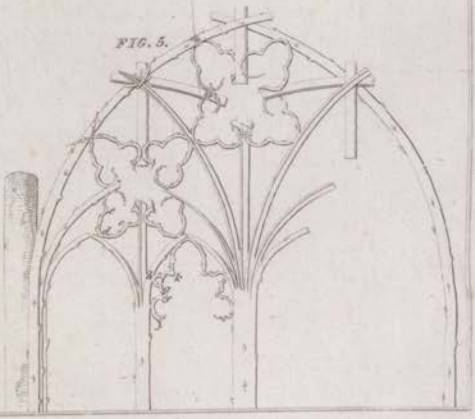


FIG. 7.

FIG. 8.

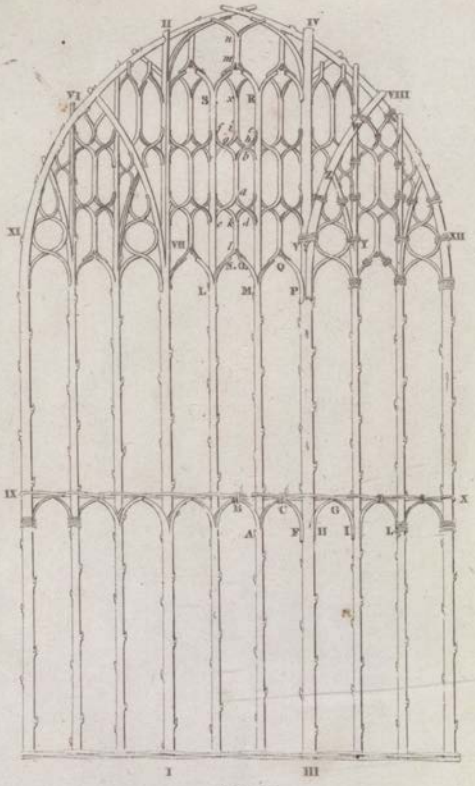


FIG. 2.

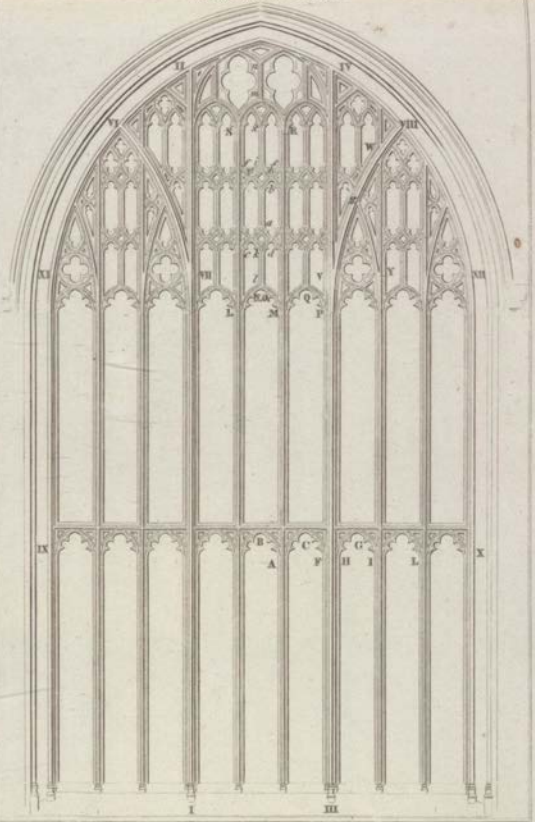


FIG. 1.

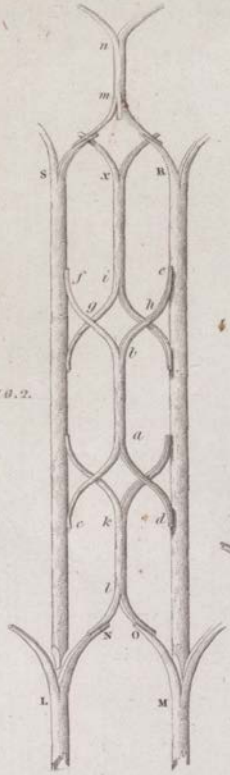


FIG. 2.

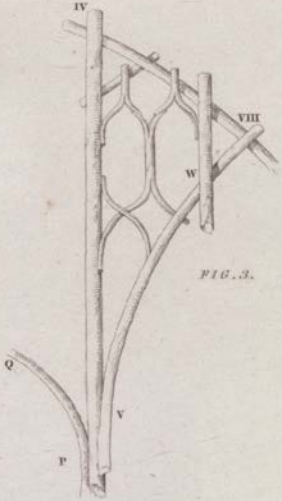


FIG. 3.

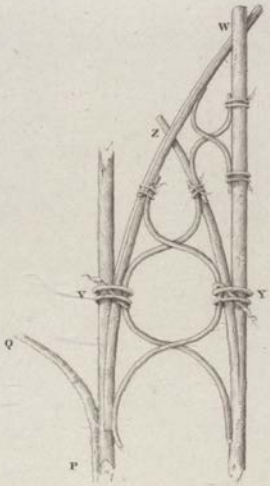


FIG. 4.

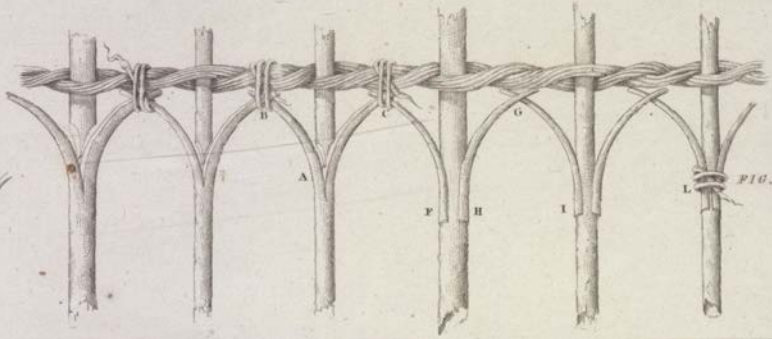


FIG. 5.

Engraved by W.H.D. Lizars, Edin.

FIG. 1.

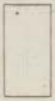


FIG. 2.

FIG. 3.

FIG. 4.

FIG. 5.

FIG. 6.

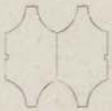


FIG. 7.

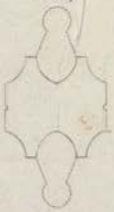


FIG. 8.

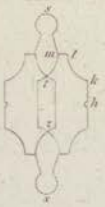


FIG. 9.

FIG. 10.

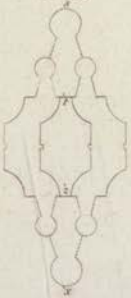


FIG. 11.

FIG. 12.

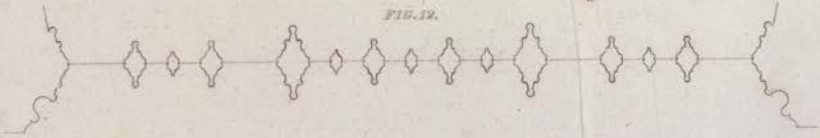


FIG. 13.

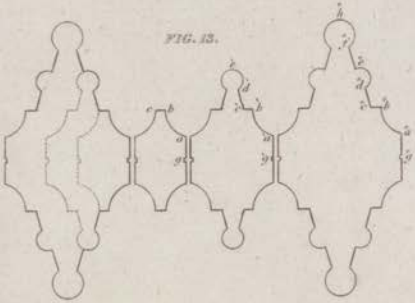


FIG. 14.

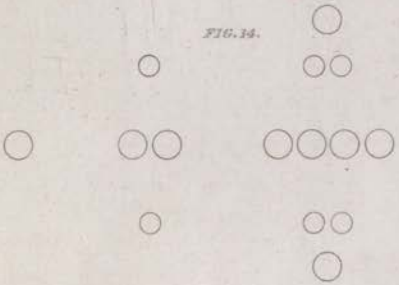


FIG. 17.

FIG. 16.

FIG. 15.

FIG. 18.

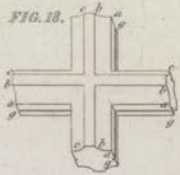


FIG. 20.

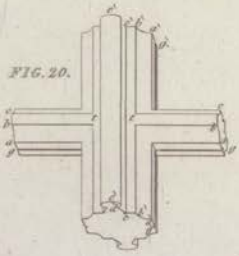
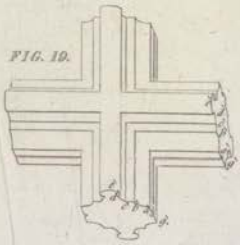


FIG. 19.



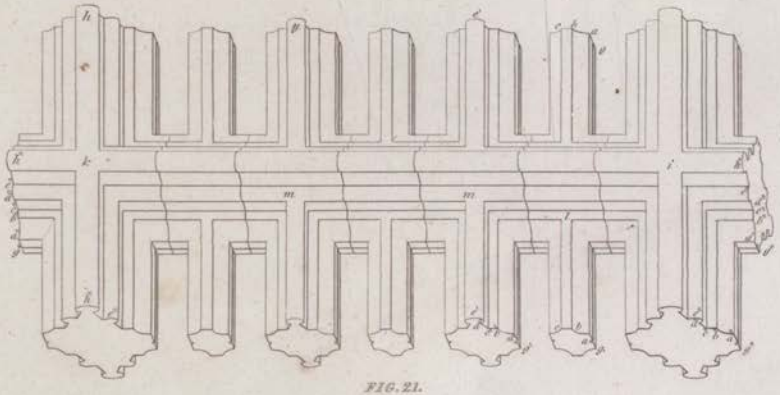


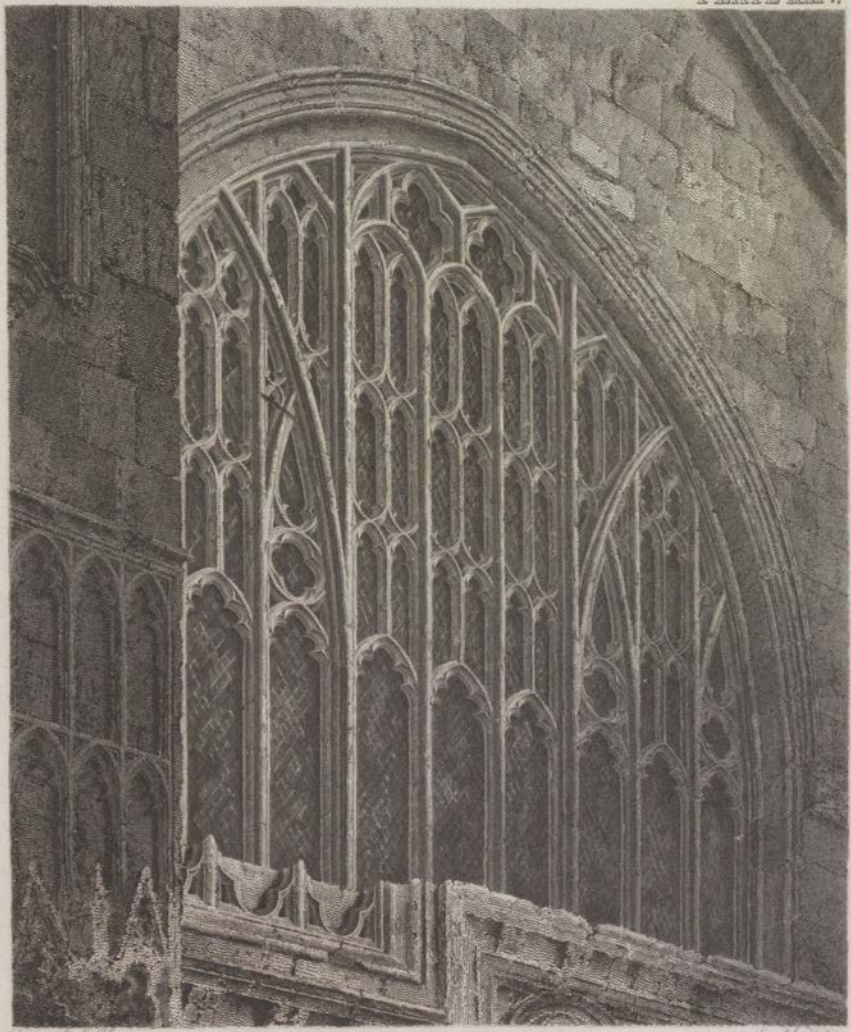
FIG. 21.

Dunglass

FIG. 2.

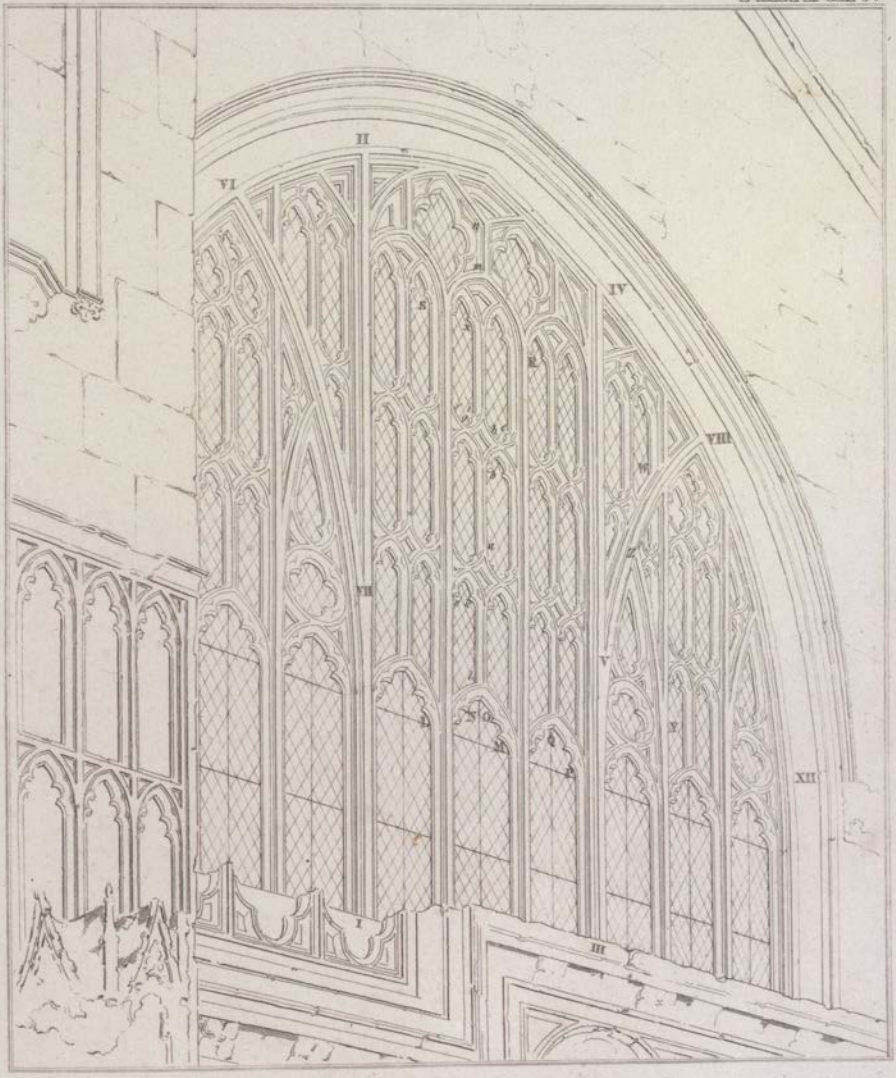
FIG. 1.

G
F
E
D
C
B
A

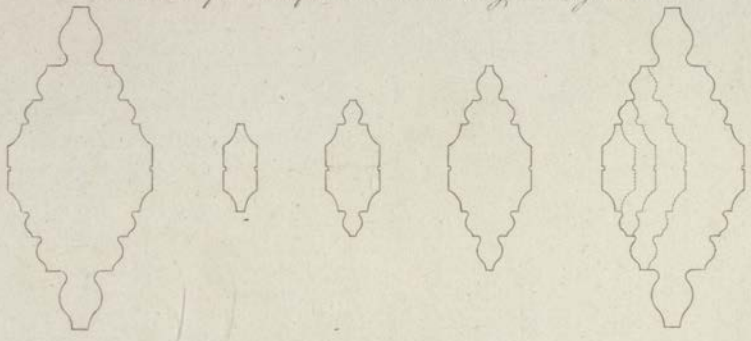


Drawn by E. Blore.

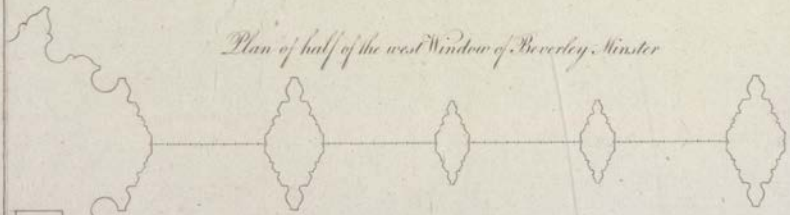
Engd by H. Le Keux.

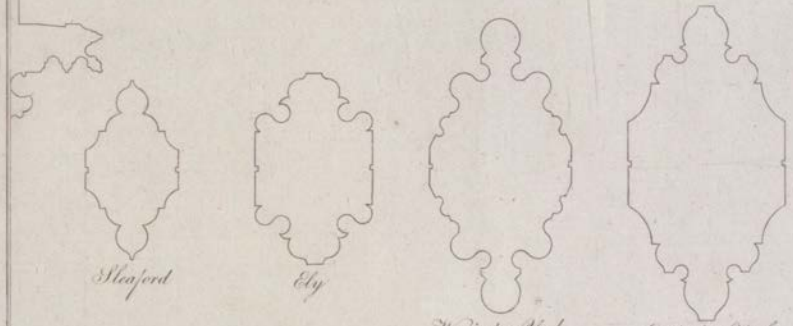

II
VI
IV
VIII
VII
V
XII
III

Four orders of Mullions from the west Window of Beverley Minster



Plan of half of the west Window of Beverley Minster





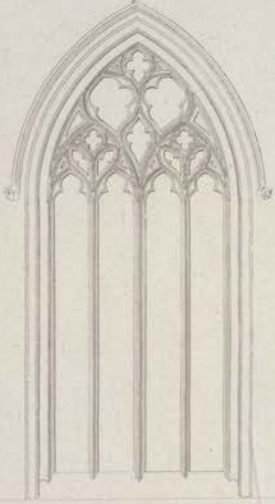
Sleaford

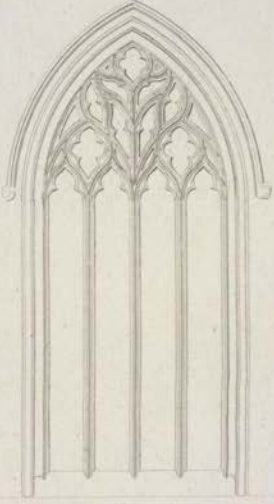
Ely

W. window York

E. window York

Sleaford.


Sleaford.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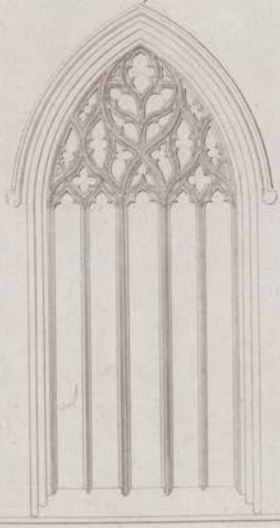
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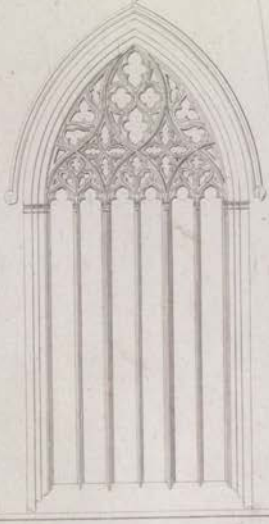
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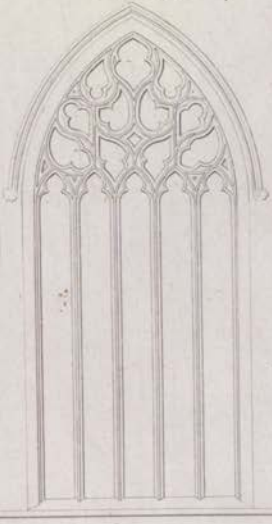

Lincoln.

Burton Coggles.

Billingborough.

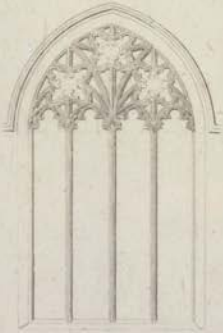
Cambridge.

Ely.

Bernack.

Melrose.

Chartham

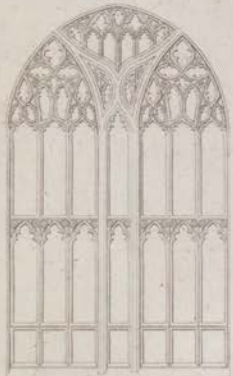


Allhallows Berking.

Ely Place London.

Grantham.

Ely.



York.

York.

FIG. 1.

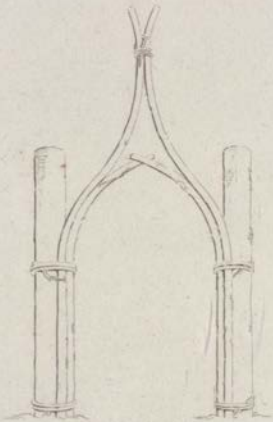


FIG. 2.

Westminster

FIG. 3.

FIG. 4.

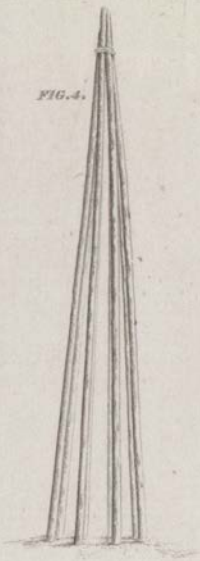


FIG. 5.

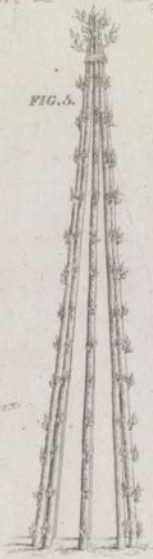


FIG. 6.

Morley

FIG. 7.

Bunny

FIG. 1.

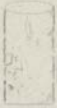


FIG. 2.

FIG. 3.

FIG. 4.

Ely

FIG. 5.

Ely

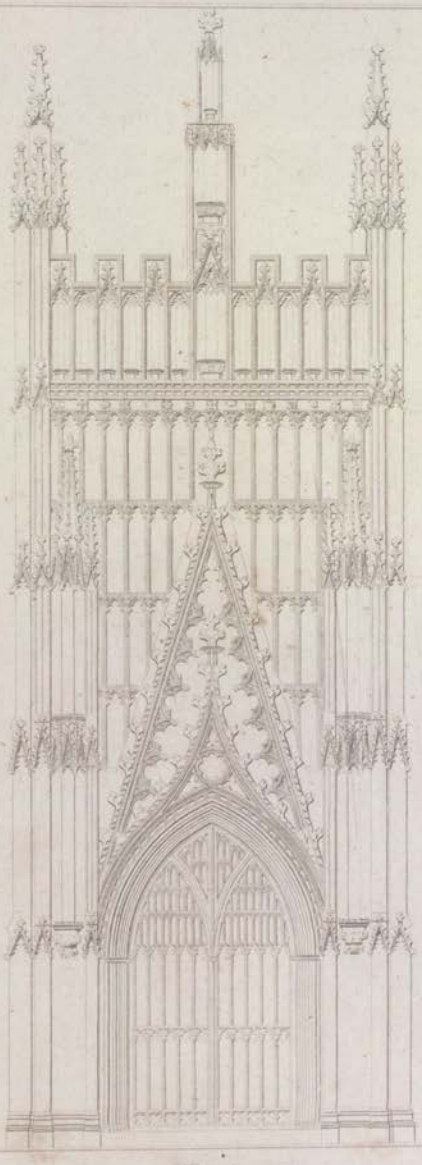
FIG. 6.

Ely

FIG. 7.

York

FIG. 8.



Beverly

FIG. 1.
Beverley

FIG. 2.

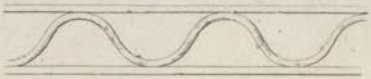


FIG. 3.
Windsor

FIG. 4.

FIG. 5.
Windsor

FIG. 6.

FIG. 7.
Edinburgh

FIG. 8.

FIG. 9.
Henry 7th's Tomb

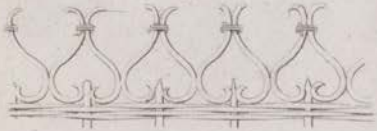
FIG. 10.

FIG. 11.
Batalha

FIG. 12.

FIG. 13.
Simon Sudbury's Tomb. Canterbury

FIG. 14.



Cambridge

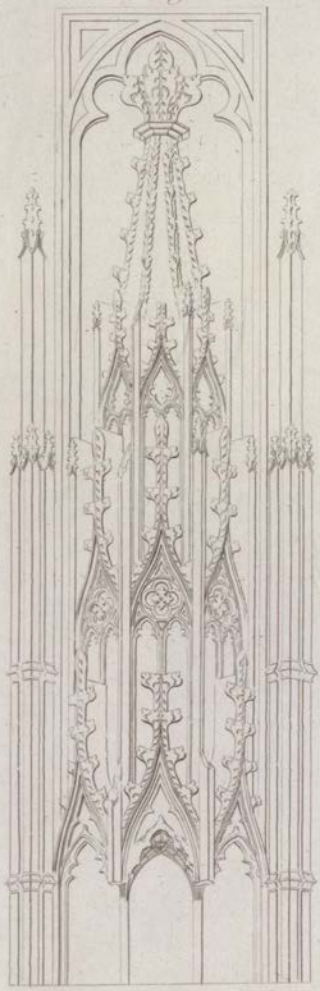
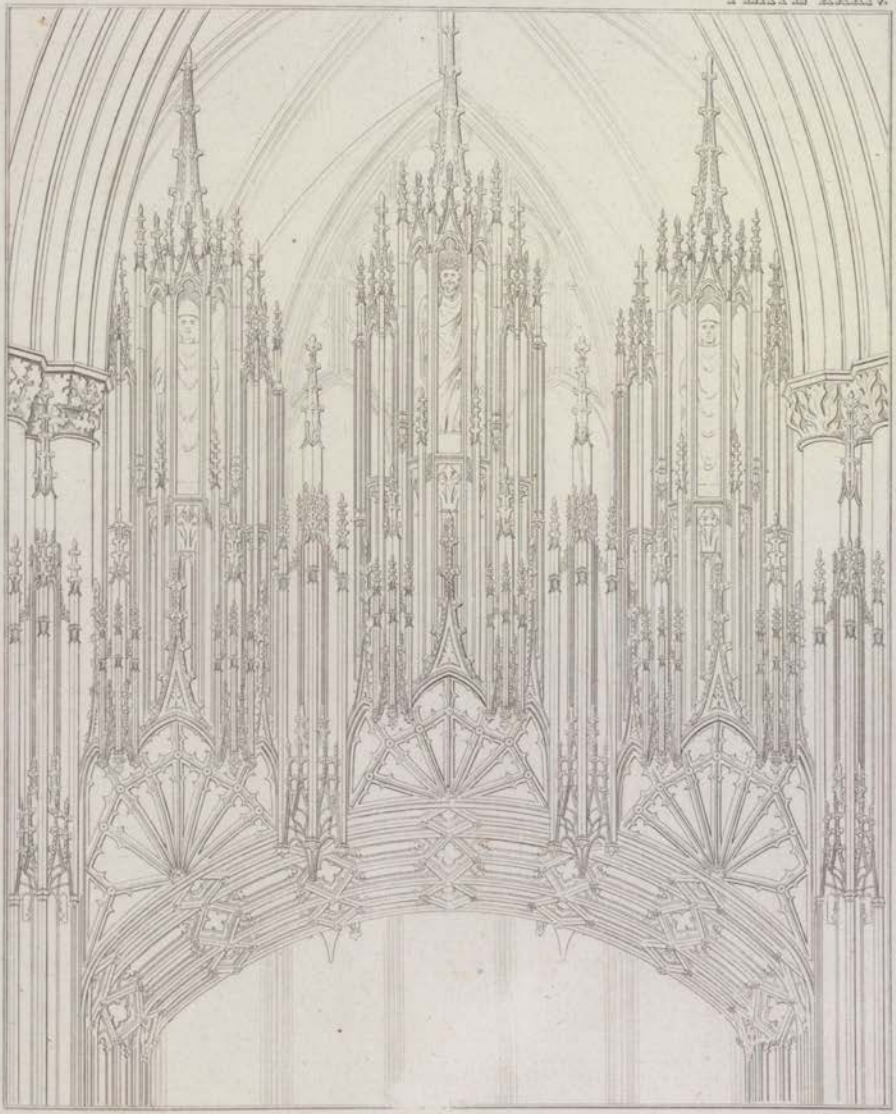


FIG. 1.

Ely

FIG. 2.



York.

FIG. 1.

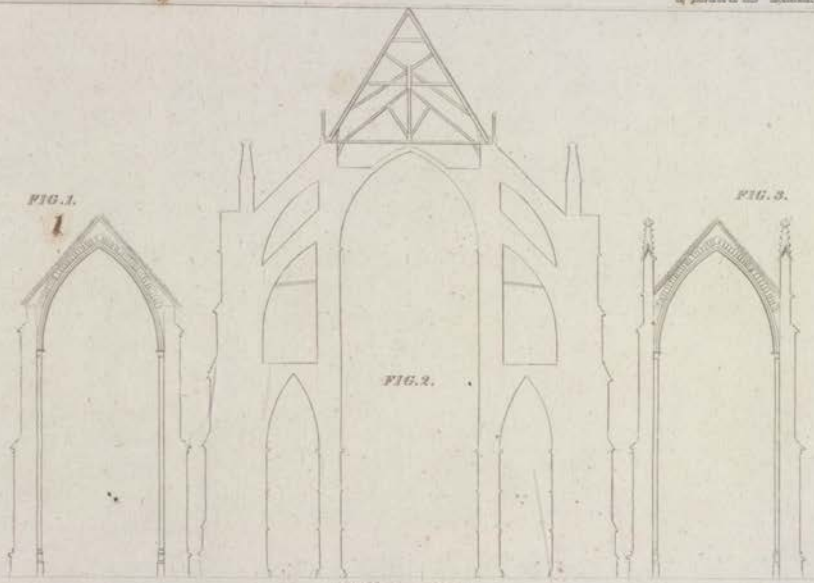


FIG. 2.

FIG. 3.

Westminster Abbey

FIG. 4.

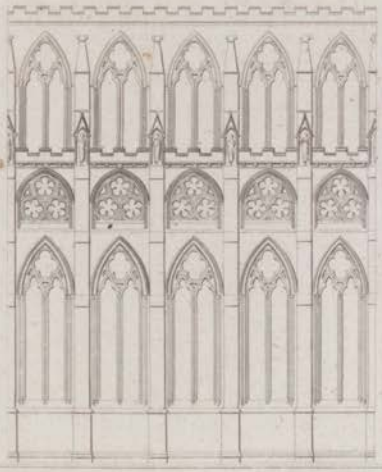
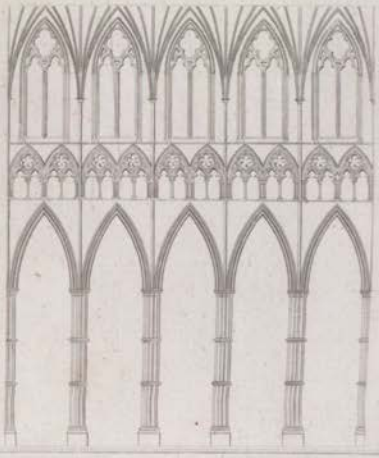


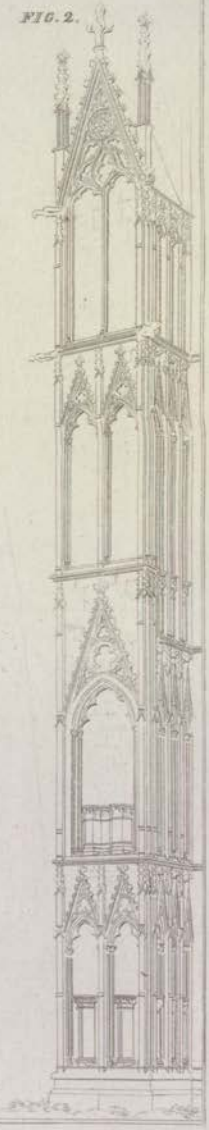
FIG. 5.



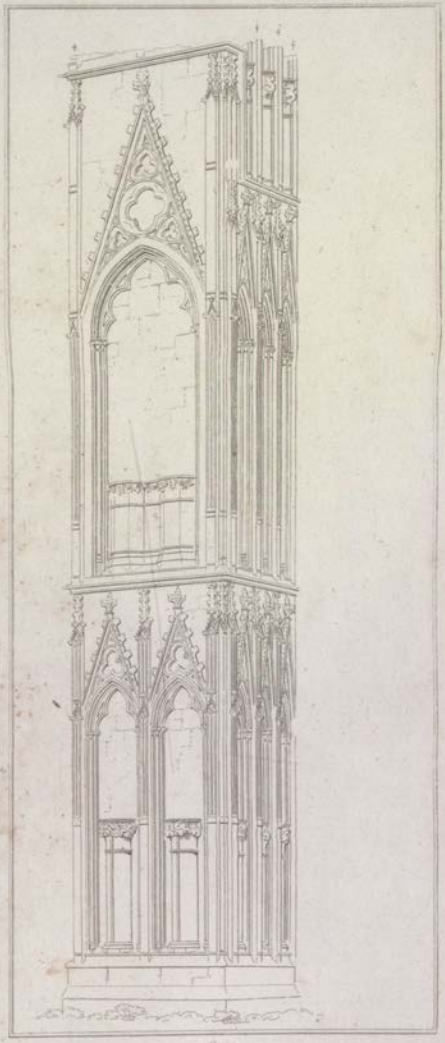
Westminster Abbey

FIG. 1.

FIG. 2.

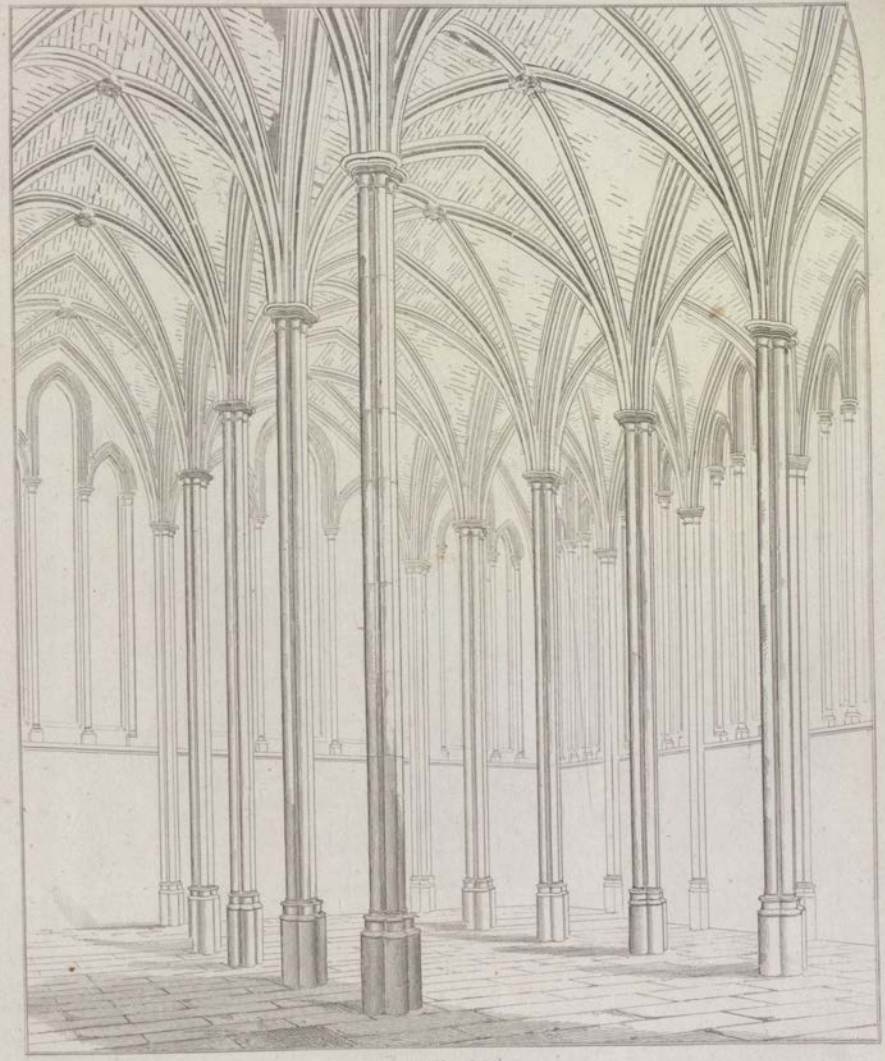


York

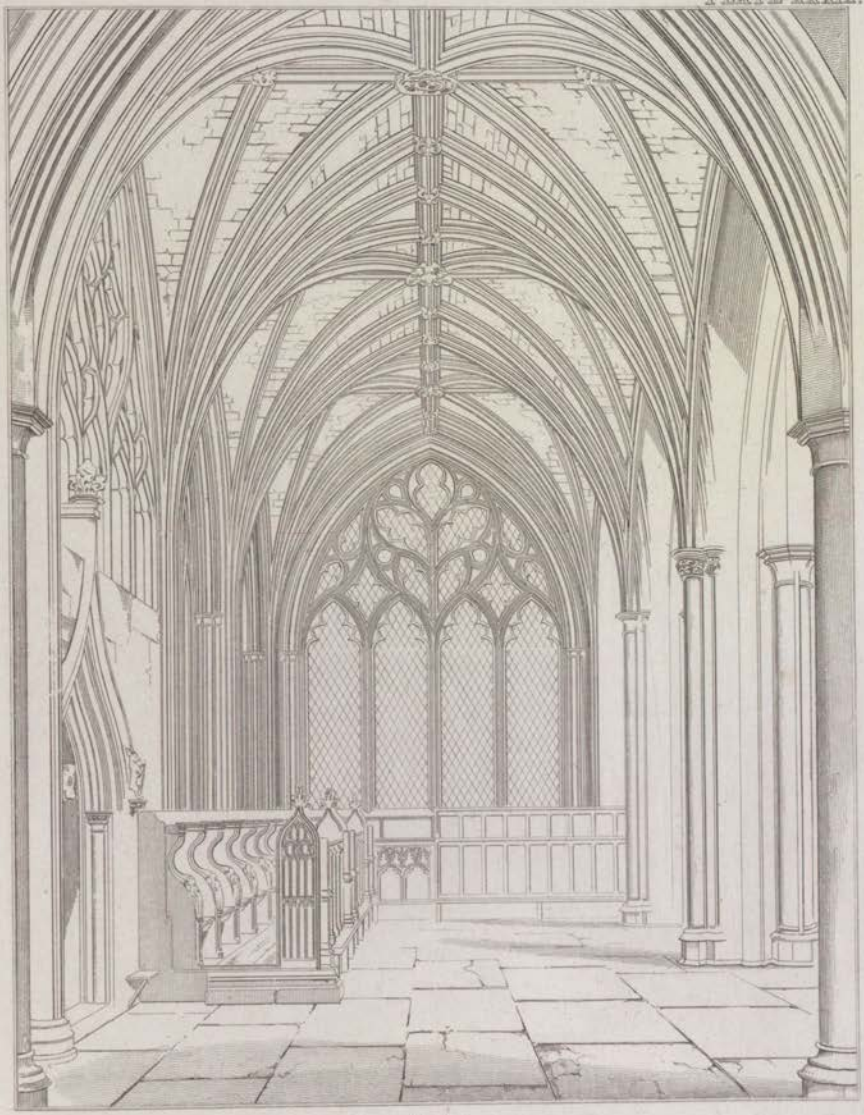


This Figure upon the Left must be supposed to stand upon the Top of that on the Right, at the places marked thus +

York.



Temple Church, London



Beverley

FIG. 1.

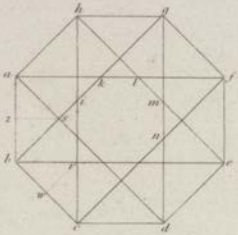


FIG. 2.

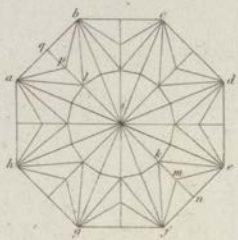


FIG. 3.

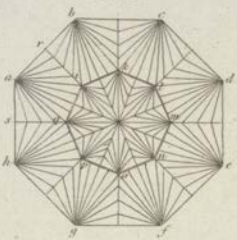


FIG. 4.

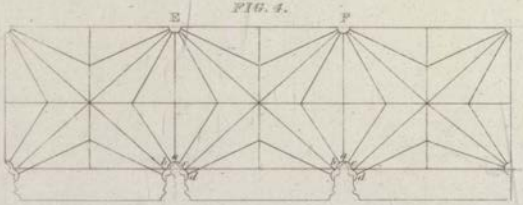


FIG. 5.

FIG. 6.

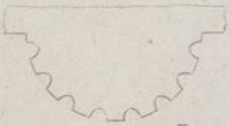


FIG. 7.

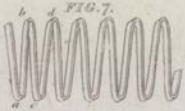


FIG. 8.

FIG. 9.

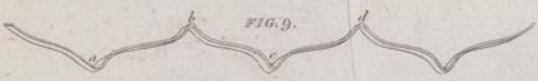
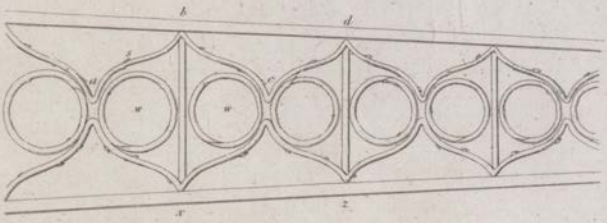
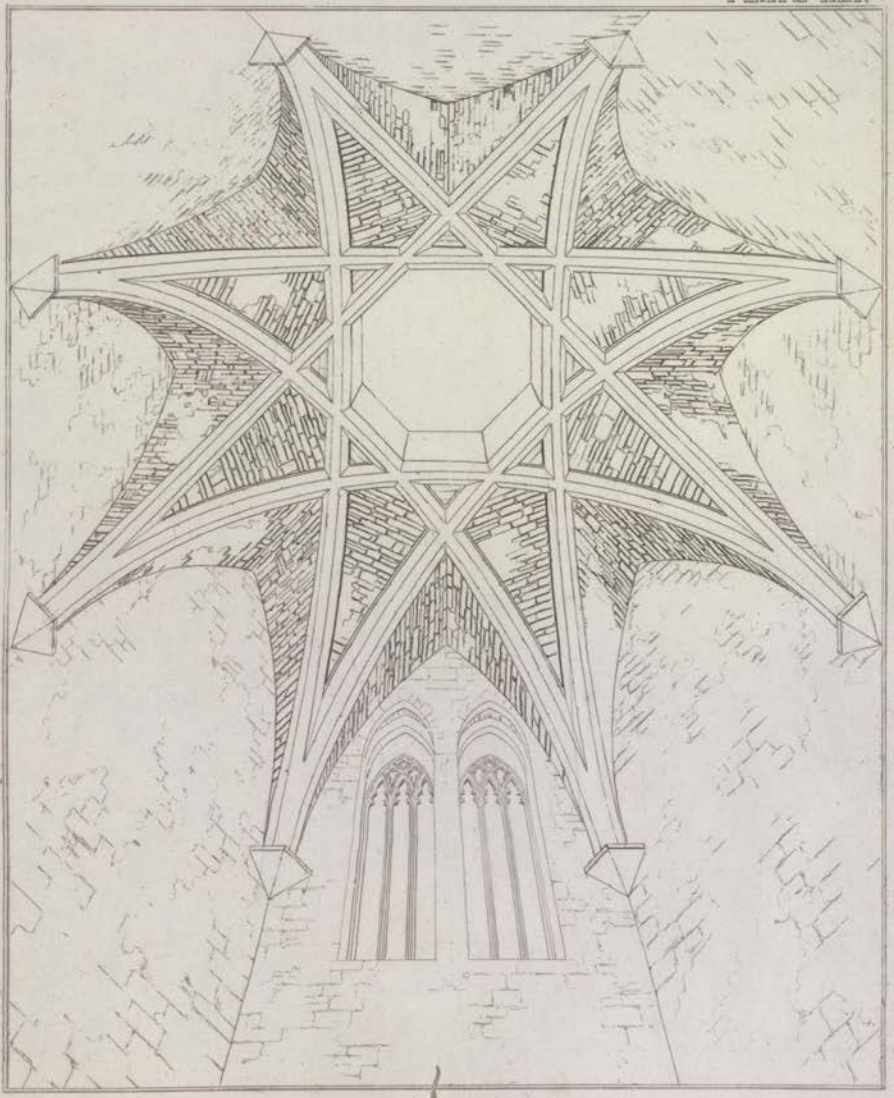
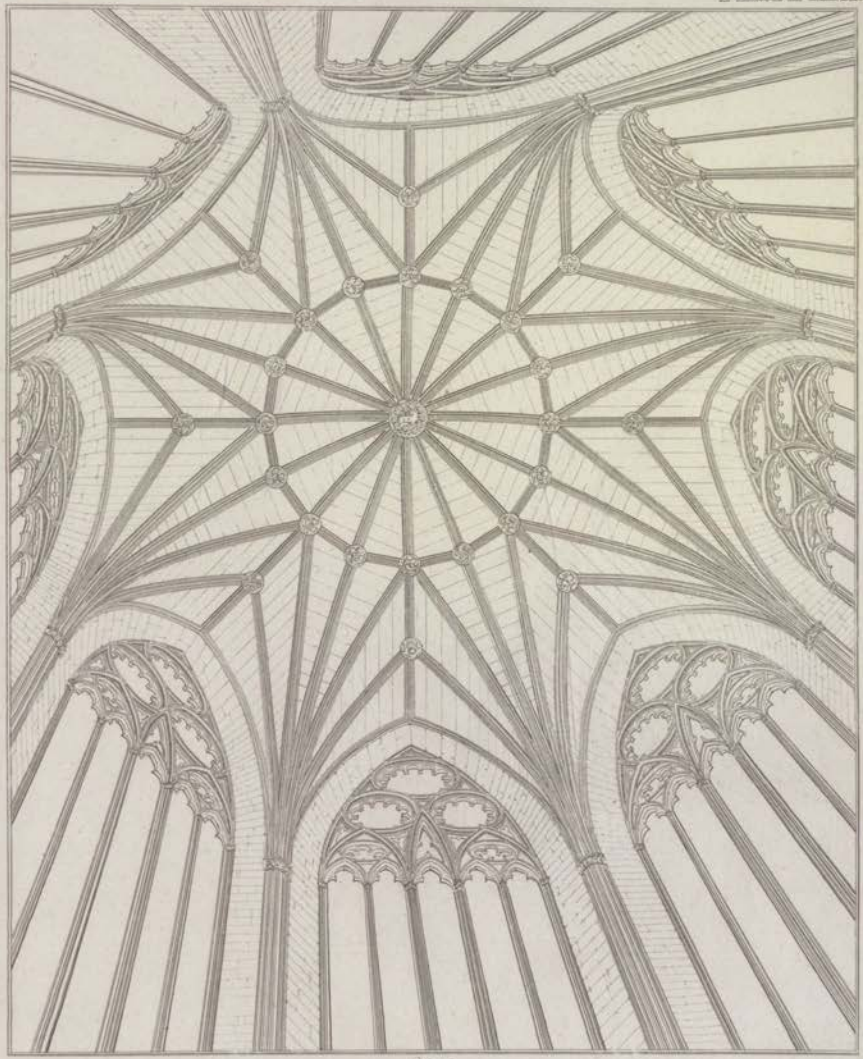


FIG. 10.

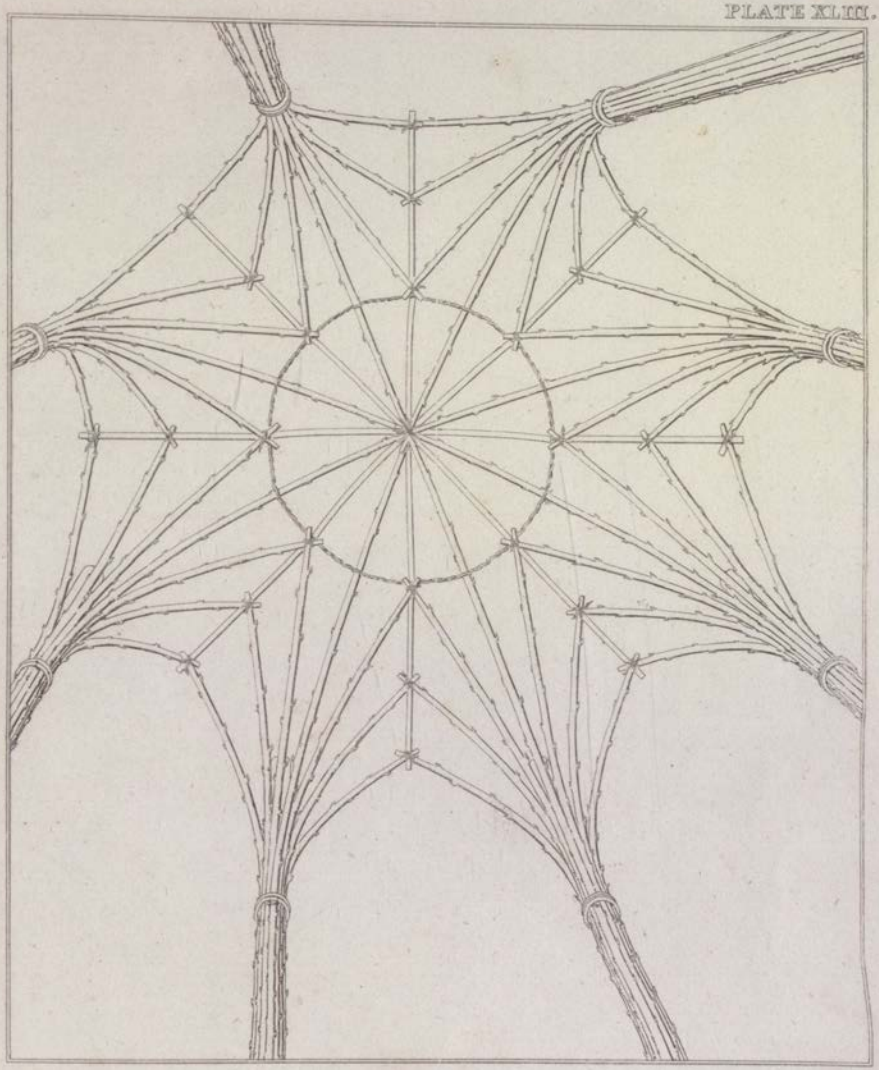


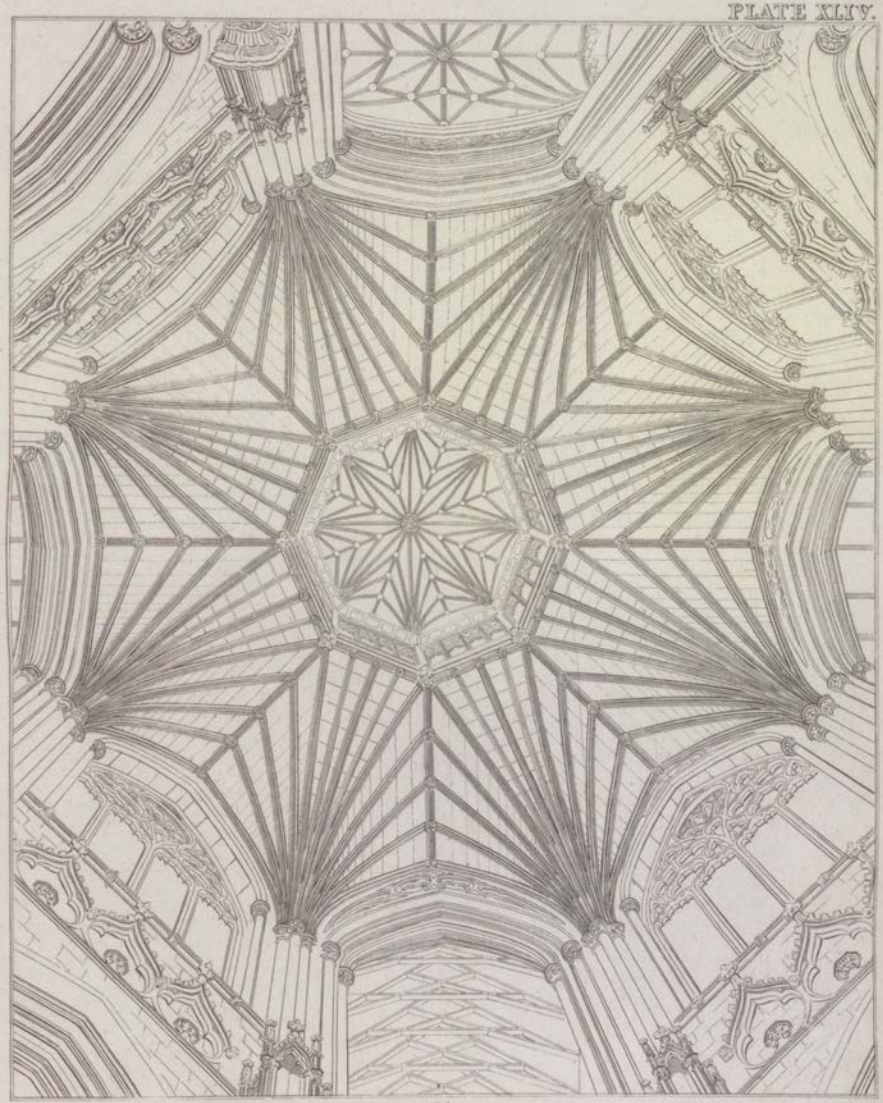


Trenham



York.

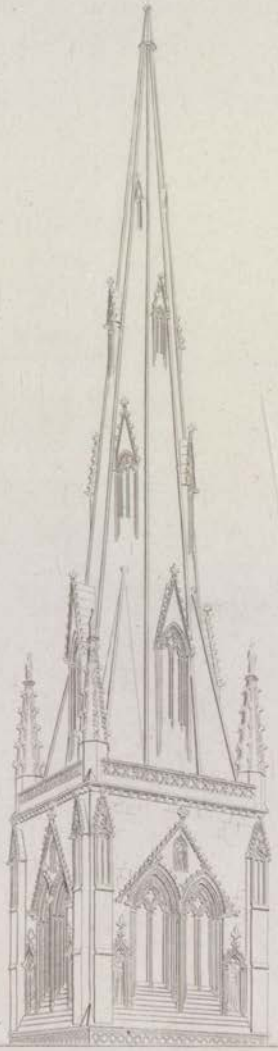




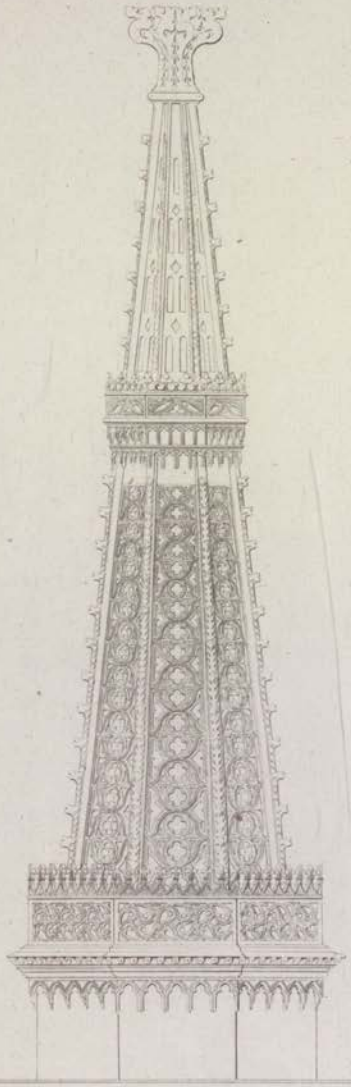
Ely

Westminster

Westminster



Newark



Batalha

c Newcastle

FIG. 1.

FIG. 2.

Durham

FIG. 1.

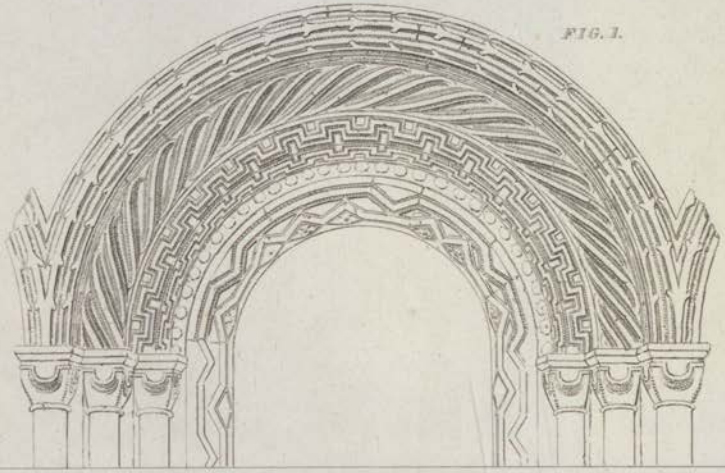
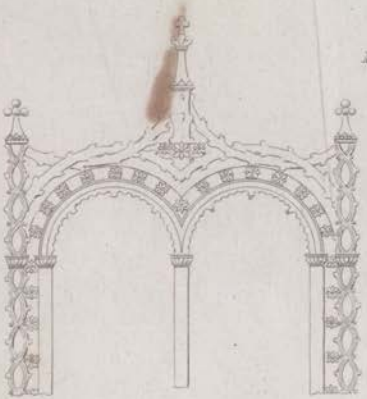
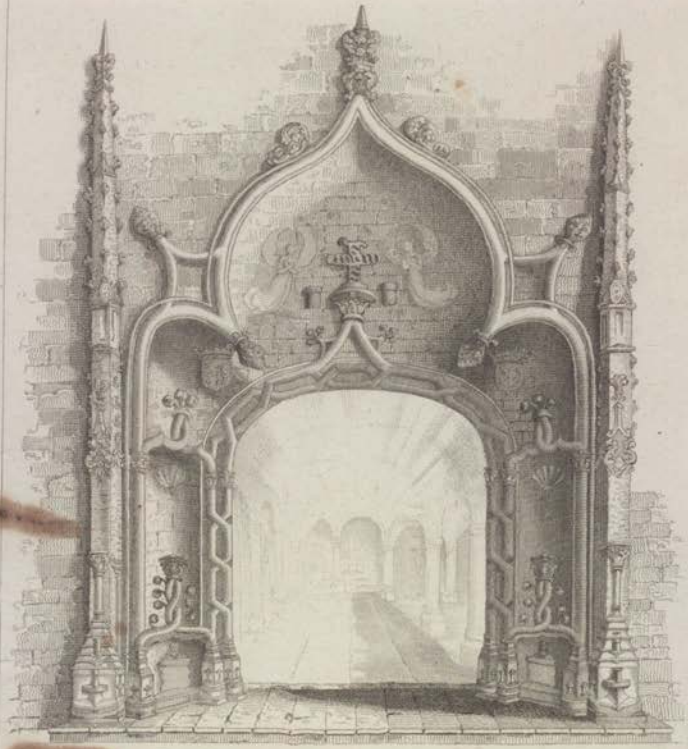


FIG. 2.



Lisbon



St. Michaels Azores

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FIG.1.

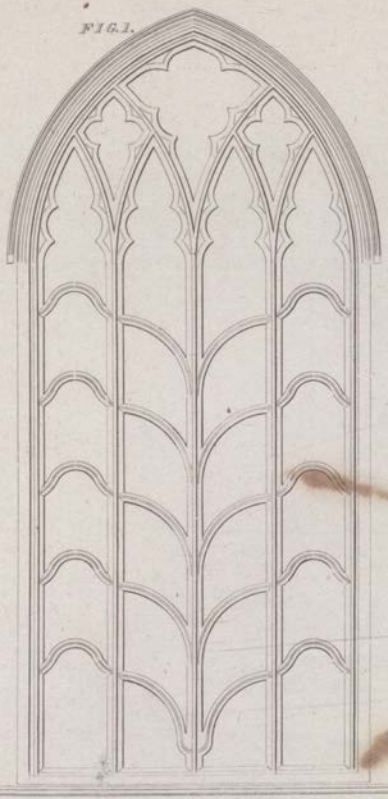
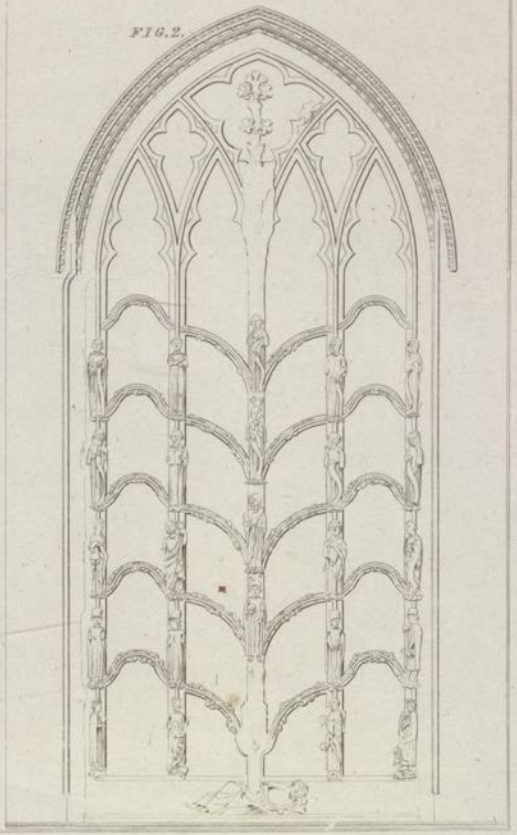


FIG.2.



Dorchester

Batalha

FIG. 1.

Drybrough

FIG. 2.

FIG.1.

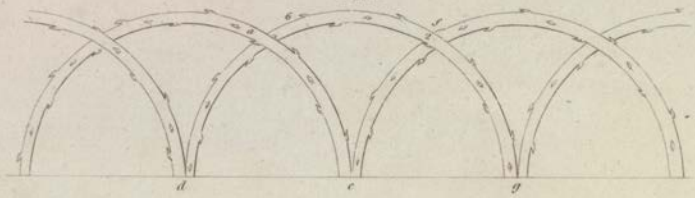


FIG.2.

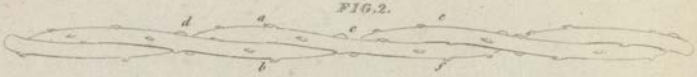


FIG.3.

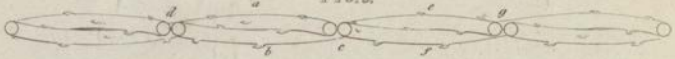


FIG.4.

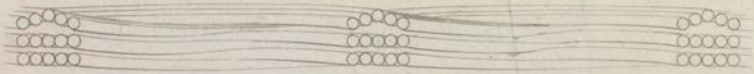
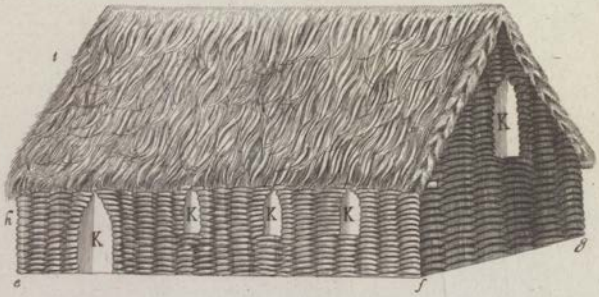


FIG.5.

FIG.6.

15. *Formam primæ istius Ecclesiæ totius orbis vetustissimæ (quâ ex supradictis authoritatibus & conjecturis assequi possimus probabilibus) hic intuere.*

Icon primæ Ecclesiæ Regio permissu extructæ.



a. b. c. d. *Ambitus cœmeterii incertæ dimensionis.*
e. f. *longitudo Ecclesiæ 60. pedum, juxta laminam.*
f. g. *latitudo Ecclesiæ 26. pedum, juxta laminam.*
h. *Parietes Ecclesiæ ex virgis contortis, juxta Malmesburium, fabricati.*
i. *tectum.*
k. k. k. k. *Ostium & fenestras è conjectura posui.*

Fac Simile
— from —
SPELMAN'S CONCILIA.
Page 11.

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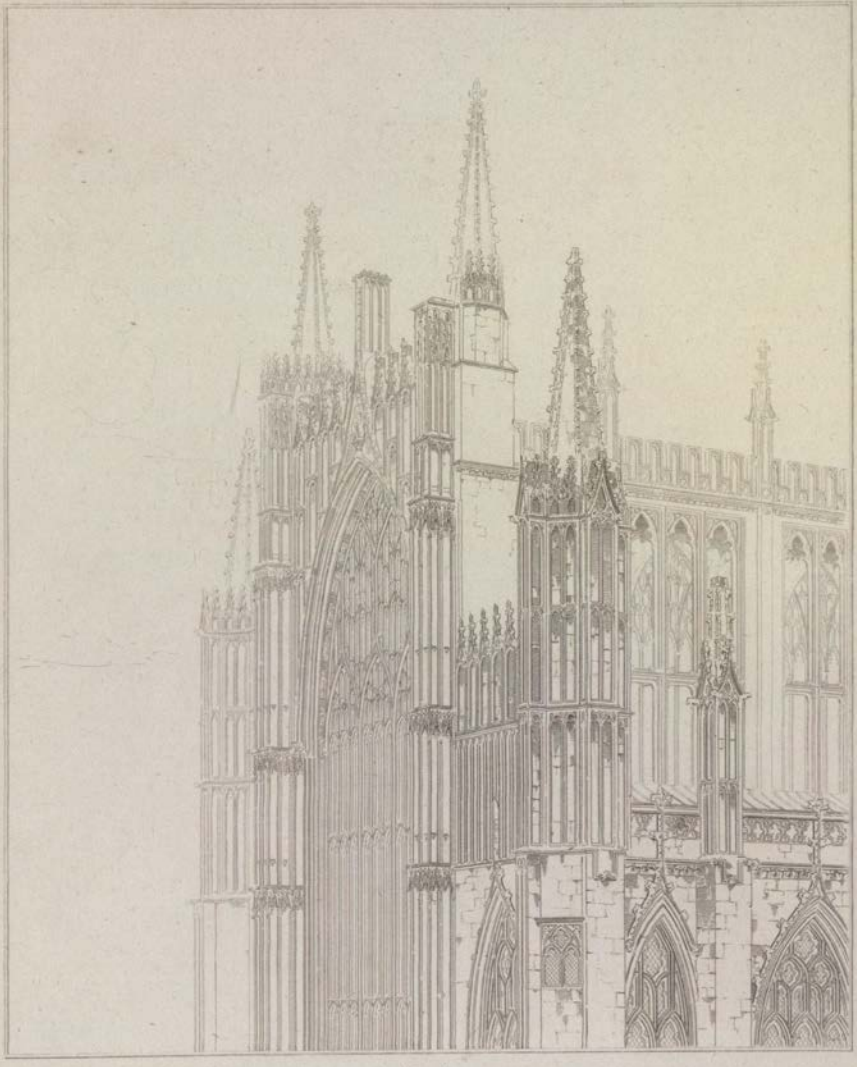

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